MEMORANDUM

STATE OF ALASKA

To: Distribution

Date:9-16-87

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File:Index.sep

From: Steve Elliott
Fishery Biologist
Sport Fish Division
Region I

Telephone:465-4270

Leon Shaul
Fishery Biologist
Commercial Fisheries Division
Region I

SUBJECT: COHO SALMON SPAWNER INDEX STREAMS

Attached is the finalized list of coho index streams for 1987 based on your comments and recommendations. Between the Sport Fish Division, U.S. Canada, and Commercial Fisheries Divison budgets we should have adequate funding for all surveys. Please make a final review; call Leon or myself if you have any changes.

Attachment

Distribution: Greg Thomason, CF, Yakutat
Ray Staska, CF, Haines
Don Ingledue, CF, Juneau
Doug Jones, CF, Juneau
Bob DeJong, CF, Sitka
Will Bergman, CF, Petersburg
Robert Larson, CF, Petersburg
Steve Hoffman, SF,Ketchikan
Dennis Hubartt, SF,Ketchikan
Art Schmidt, SF, Sitka
Mike Bethers, SF, Juneau
Randy Erikson, SF, Haines
Bob Johnson, SF, Yakutat
Bob Zorich, SF, Petersburg

cc: Dave Cantillon
Gary Gunstrom
Gary Sanders

Date last revised:9-15-87

Coho Salmon Escapement Index Streams to be surveyed September - November, 1987 and agency responsible for survey. (1 = hatchery influence; 2 = possible straying from hatchery releases; 3=Survey by Commercial Fisheries Div staff -- funding by Sport Fish Div.)

HAINES AREA:

Chilkat River (20-22 mi)	115-32-025	(SF)
Clear Creek	115-32-027	(SF)
Takhin River	115-32-030	(CF)
Spring Creek	115-32-040	(SF)
31 mile Creek	115-32-057	(SF)
Kelsall River	115-32-064	(SF)
Tahini River	115-32-068	(SF)

JUNEAU AREA:

Switzer Creek	111-40-007	(SF)
Peterson Creek	111-50-010	(SF)
Auke Creek (weir)	111-50-042	(ABL)
Montana Creek [2]	111-50-052	(SF)
Steep Creek	111-50-056	(SF)
Jordan Creek	111-50-062	(SF)
Outer Point Creek	111-50-075	(SF)
Hasselborg River	112-67-035	(CF)
Chiak Bay Creek	112-80-028	(CF)
Berners River	115-20-010	(CF)
Taku River Tributaries:		
Sockeye Creek	111-32-038	(SF&CF)
Fish Creek	111-32-056	(SF&CF)
Flannagan Slough	111-32-048	(SF)
Yehring Creek (weir)	111-32-066	(SF&CF)
Johnson Creek	111-32-068	(SF&CF)
Nahlin River	111-32-270	(CF)
Dudidontu River	111-32-280	(CF)

KETCHIKAN AREA:

Tombstone River	101-15-019	(CF)
Fish Creek	101-15-085	(CF)
Humpback Creek	101-30-083	(CF)
White River	101-45-024	(CF&SF)
Carrol River	100-45-078	(SF)
Ward Creek [1]	101-47-015	(SF)
Indian River	101-71-004	(SF)
Walker Creek	101-71-028	(CF)
Eulachon River	101-75-015	(SF)

Herman Creek	101-75-005	(CF)
Traitors Creek	101-90-029	(CF)
Prince of Wales Island:		
Twelvemile Creek	102-60-072	(SF)
Harris River	102-60-082	(CF)
Maybeso Creek	102-60-084	(SF)
Natzuhini Creek	103-40-035	(SF)
St. Nicholas Creek	103-60-059	(SF)
Cable Creek	103-60-077	(SF)
S. Staney Creek	103-90-042	(SF)
108 Creek	106-30-080	(SF)
PETERSBURG AREA:		
Falls Creek [1]	106-44-006	(SF&CF)
Bear Creek	108-50-003	(SF&CF)
Duncan Creek	106-43-075	(CF)
Mosman Creek	106-22-066	(CF)
Navy Creek	106-22-016	(CF)
Snake Creek (opt)	107-30-70	(CF)
Martin Creek (opt)	107-40-38	(CF)
Harding River	107-40-49	(CF)
N. Bradfield River	107-40-52	(CF/SF) [3]
E. Bradfield River	107-40-53	(CF/SF) [3]
Sumner Creek	108-40-40	(CF)
Ohmer Creek	108-40-50	(CF)
Kake Bake Creek	109-32-020	(CF)
Unnammed Creek (opt)	109-42-40	(CF)
Unnammed Creek (opt)	109-45-10	(CF)
Unnammed Creek (opt)	109-52-08	(CF)
Portage Creek (opt)	110-16-002	(CF)
Stikine River Tribs:		
North Arm Creek	108-40-010	(CF)
Shakes Slough	108-40-013	(CF)
Ketili Creek	108-40-014	(CF)
Kikahe River	108-40-016	(CF)
Goat Creek	108-40-017	(CF)
Shuktusa Creek	108-40-018	(CF)
Andrews Creek	108-40-020	(CF)
Katete Creek	108-70-009	(CF)
SITKA AREA:		
Starragavan Creek	113-41-015	(SF)
Indian River [1]	113-41-019	(SF)
Salmon Lake Creek	113-41-032	(SF)
Kizuchia Creek	113-41-042	(SF)
Nakwasina River	113-43-002	(SF)
Sinitsin Creek [2]	113-62-008	(SF)

St. Johns Creek	113-66-006	(SF)
Black River	113-81-011	(SF)

YAKUTAT AREA:

Airport ditches	NA	(SF)
Akwe River	182-40-010	(SF)
Italio River	182-50-010	(SF)
Old Situk River	182-70-015	(SF)
Situk River	182-80-010	(SF)
Tawah/Lost River	182-80-030	(SF)
Yahtse River	185-10-010	(CF)
Tsiu River	192-42-020	(CF)
Tsivat River	192-42-040	(CF)
Kaliakh River	192-41-010	(CF)

MEMORANDUM

STATE OF ALASKA

To:Gary Sanders
Regional Research Supervisor
Sport Fish Div., Reg. I

Date:7-27-87

Disk:D:\

File:Johnson.jul

From: Steve Elliott
Fishery Biologist
Sport Fish Div., Reg. I

Telephone: 465-4270

SUBJECT: YAKUTAT COHO INDEX STREAMS

Bob Johnson asked me to relay the following to you in regard to your recent memo on coho index streams. He recommends the following streams and Divisional resposibilities for the Yakutat area:

Airport ditches	(SF)	NA
Old Situk River	(SF)	182-70-015
Situk River	(SF)	182-80-010
Tawah/Lost River	(SF)	182-80-030
Akwe River	(CF)	182-40-010
Italio River	(CF)	182-50-010
Tsiu/Tsivat Rivers	(CF)	192-42-020 & 040

Greg Thomason may want to add additional streams.

cc B. Johnson, SF
G. Thomason, CF
M. Bethers, SF

Steve:

Kaliakh River (CF) — 192-41

Yakutse River (CF) — 185-10

Greg Thomason

MEMORANDUM State of Alaska

TO: Distribution

DATE: February 24, 1987

FILE NO.:

THRU:

TELEPHONE NO.: 465-4270

SUBJECT: Coho Escapement Index Streams

FROM: Steve Elliott SE
Fishery Biologist
Sport Fish Division
Douglas

w/ Original Mike Bethers evaluation of [illegible]

The following is excerpted from the draft Sport Fish Coho Research Operation Plan. The plan is a take-off on the Coop. CF. SF. Coho Research Plan and seeks to establish a standard set of coho index streams that are surveyed each year using the same methods. The goal is consistency. Please review the plan text with the following in mind:

1. Are these streams realistic index streams? Can they be done each year without fail, or are they surveys that you do only if you have the funds, time, etc (we never have good weather).

2. If each stream is realistic, what portion of the stream do you survey. Please be specific; where do you begin the survey and where do you end; how many miles are involved? Listing "entire" is not enough.

3. What is the best time for doing the survey. Notes on conditions would also be helpful. For example in the Taku, we have to wait until a good cold snap has reduced turbidity -- but if one waits too long the fish are scattered and impossible to count. Describing the window for optimum conditions can be important.

The index streams, area of survey, and preferred time of survey are listed on Table 1.

Al Bingham will soon be breathing down my neck for this coho operational plan. I'd appreciate your prompt attention to this and return your comments to me by March 9, 1987.

Attachment

cc: M.Bethers ✓
R.Ericksen
B.Johnson
A.Schmidt
G.Sanders
D.Siedelman

Table 1. Location, schedule, and date of spawner escapement indiced in coho salmon index streams.

Stream	Survey Area	Date	Method
Haines Area:			
31 mile Creek	entire	Oct-Nov	foot,
37 mile Creek	entire	Oct-Nov	foot
Bear Creek	entire	Oct-Nov	foot
Chilkat River	20-22 mile	Oct-Nov	foot,air
Chilkat River	(above Tahini)	Oct-Nov	foot,boat
Herman Creek	entire	Oct-Nov	foot
Kelsall River	2 mi below bridge	Oct-Nov	foot
Little Salmon R.	entire	Oct-Nov	foot
Nataga River	1 mi. above bridge	Oct-Nov	foot
Spring Creek	entire	Oct-Nov	foot
Tahini River	from mouth to border.	Oct-Nov	foot, boat
Juneau Area:			
Auke Creek (weir)			
1 Jordan Creek			
2 Montana Creek			
3 Outer Point Creek			
4 Peterson Creek			
5 Steep Creek			
6 Switzer Creek			
Ketchikan Area:			
Carrol River			
Eulachon River			
Indian River			
Ward Creek			
Petersburg Area:			
Bear Creek			
Falls Creek			
Ohmer Creek			
Petersburg Creek			
Sumner Creek			
Sitka Area:			
Indian River			
Kizuchia Creek			
Nakwasina River			
Salmon Lake Creek			
Sinitsen Creek			
Starrigavan Creek			
St. Johns Creek			
Yakutat Area:			
Airport ditches		10/1-2/1	foot
Ankau River		8/5-10/31	air
Akwe River		9/15-10/31	air
Italio River		9/15-10/31	air

Randy W. will be back in Haines by late Feb. Contact through Sitka

Call Bob J @ home (ALWOP) 784-3408

-Continued-

Table 1. (cont'd) Location, schedule, and date of spawner escapement indiced in coho salmon index streams.

Stream	Survey Area	Date	Method
Old Situk River	10 mi. Bridge to Situk then up to 9 mi. bridge	10/10-10/31	float
Ophir Creek		10/1-11/15	foot
Situk River		8/7-10/15	float
Tawah Creek/Lost R.		9/15-10/31	air
Tsiu River		9/15-10/31	air

MB 2/27/87

Coho Index Streams

Steve

This is in response to your inquiry of 2/24/87 on coho index streams in the Gearhart area.

1. Yes, the streams are real life representations of our local stream types and they can be done on an annual basis.

2. Public Creek - count all the mothers!

Jordan Creek. Two pers. one vehicle. One pers drops other pers off at Vanduken Drive and then drives up to Nancy Street and parks car and counts upstream to headwaters. Most downstream person counts from Vanduken Drive upstream to Nancy Street and then picks up car and drives up to Thunder Rd trailer court to pick up other person. The entire stream upstream from Vanduken Drive is surveyed. See Map.

Montana Creek. Two pairs people. Two vehicles to survey in one day. One vehicle dropped off at Back Loop Bridge. Four pers in other car drive to old broken bridge and let out 2 surveyers and drive car back down to rifle range bridge

One pair people count Montana Creek upstream. From bridge upstream to Montana Cr. trail bridge. Then come back down and go up McGinnis Creek (2nd small creek) until you run out of fish. Then come back down McGinnis Creek and cut over to headwaters of "Little McGinnis" and go down to confluence of Montana Creek. From there go down to rifle range bridge, pick up car and go home and pick out devils clubs and have a beer. This part of the survey will take a day. The other pair of people count from the rifle range bridge downstream to Back Loop bridge - braided area behind shit house and trib across from shit house. Look in deep pools and log jams real need in lower area. Water is very dark! The entire stream upstream from Back loop Bridge is counted See maps—

Outer Point Creek. Two pass best. Simply hike trail from end of N. Dow, hwy and head up mainstem. to end then back down and hit all ribs on north side of stream. Water is real dark. Count slower holding areas upstream from trail very carefully. Count entire stream upstream from trail crossing. Down stream from trail is private property, and land owners are a hard group to deal with. If two per trail one can count ribs upstream and one mainstem. Meet at pre determined place along mainstem - 1/2 - 2/3 up to end of stream

Peterson Creek, 25 mile. One pers can do it. Count upstream from Glacier Hwy up into gorge where you'll run out of fish. Then head back downstream and get other channels of braids. - Anadromous Count entire stream upstream from Glacier Hwy.

Sheep Creek. Park at the salmon life history sign turnout. Count upstream to falls then go back down to stream mouth and count upstream to car. Count pools real carefully: this are main holding areas. Good glasses are a must here. See map

Switzer Creek. Park car at Old Gl. Hwy culverts Count down to Egan drive. Do a lot of poking under undercut banks = good hiding places. Go back upstream and count from Old Glacier Hwy upstream to old logging bridge and culvert on Mountain avenue. Hike sheets back to car. See map If two pers avail, one start at headwaters and work down. one start as outlined above and meet in the middle section.

Stream	No People	Time for survey	Comment
Jordan	2	3 hrs	Watch out for mad dogs -
	1	4-5	
Montana Cr	2	1 extra long day - 2 pers min in	
	2 prs	1 day	upper section
Otter Point Cr	1	1 day	
	2	4-5 hrs	
Peterson Cr	1 or 2	2 hrs	+ 1 hr driving time
Steep Cr	1	1-1½ hrs	
Switzer Cr.	1	4 hrs	
	2	2-3 hrs	

Would recommend firearms be carried at Peterson Cr, Montana Cr and Otter point Creek. Have seen several black bears over the years on middle section of Jordan and lots of sign on Switzer. Made a big bang stick on Jordan Cr too.

In all areas, study deep dark pools (tanic water) very carefully and also under log jams etc.

Poke a walking stick under any overhanging bank where there's enough cover for a sneaky coho to hide.

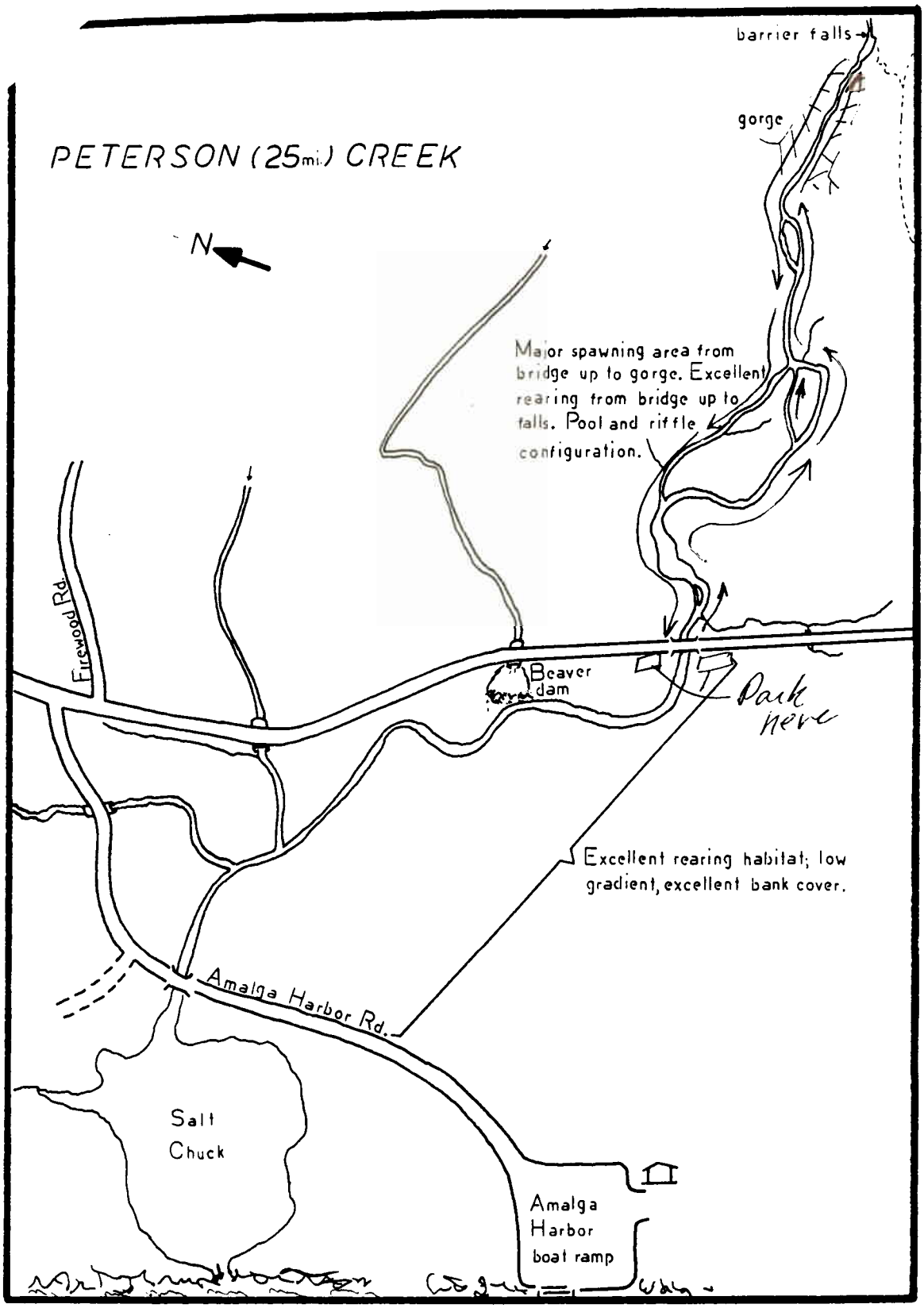


Figure 46.1. Map of Peterson Creek.

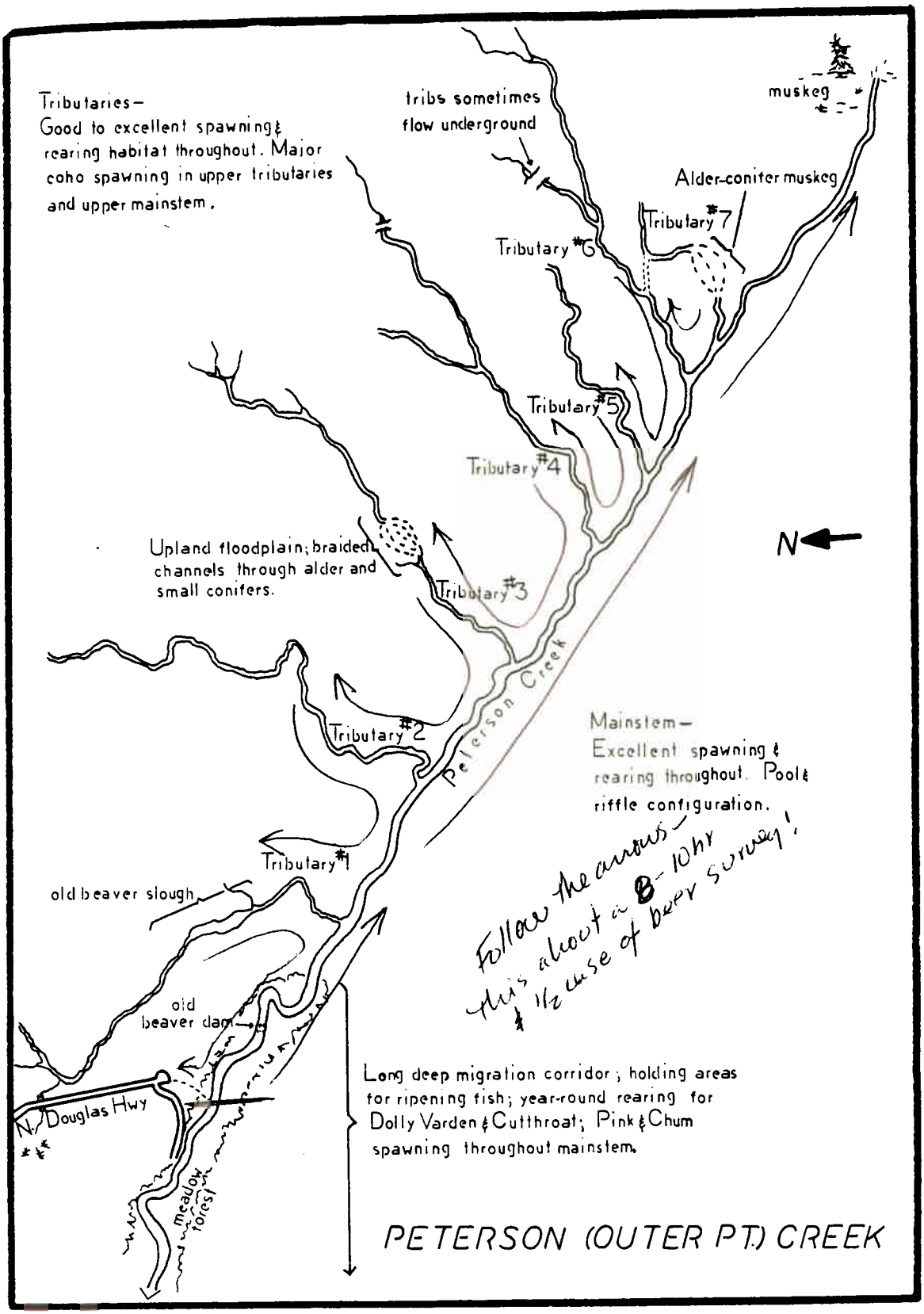


Figure 47.1. Map of Peterson (Outer Point) Creek.

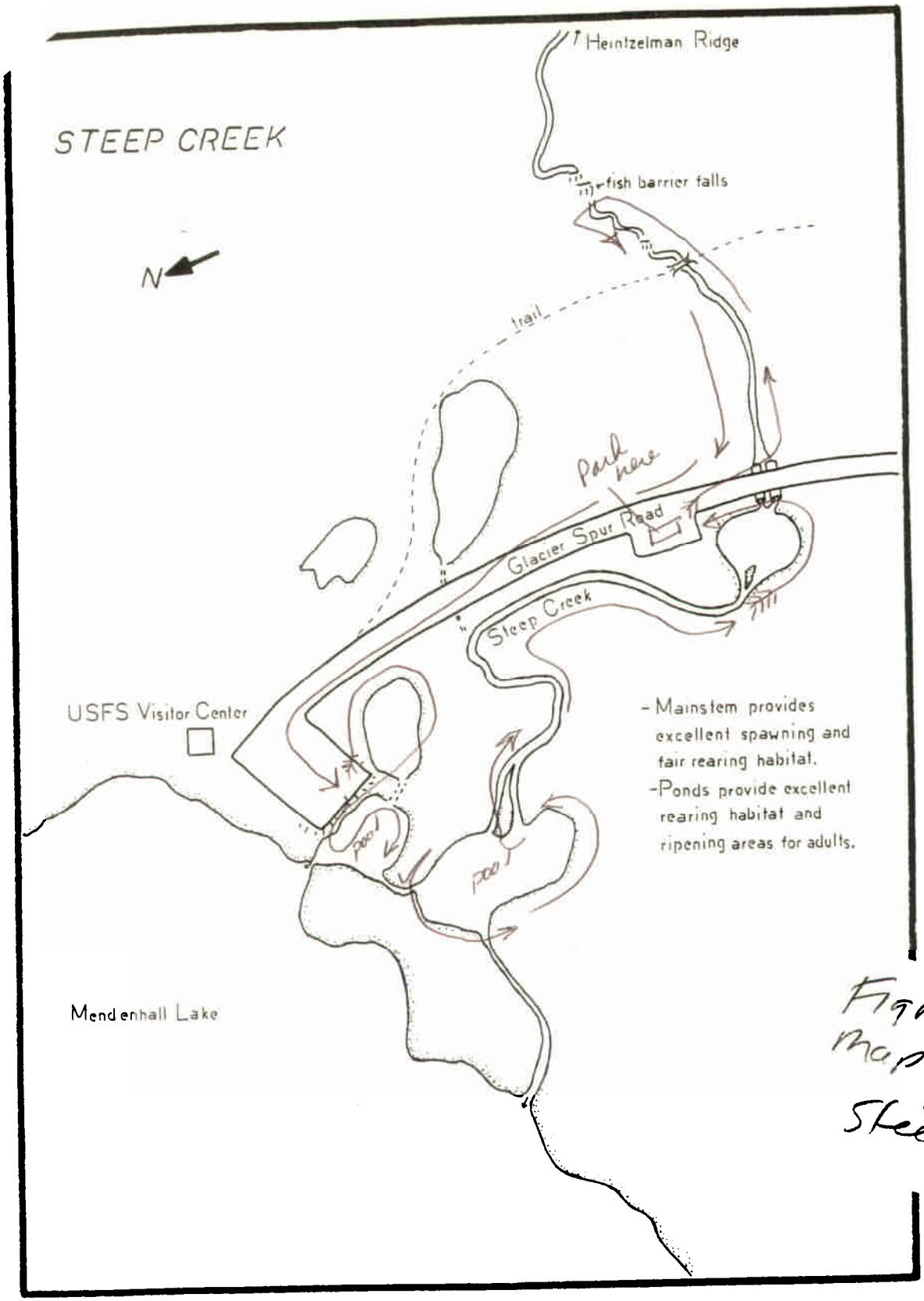


Figure 56.1 Map of Steep Creek

Figure 56.1. Map of Steep Creek.

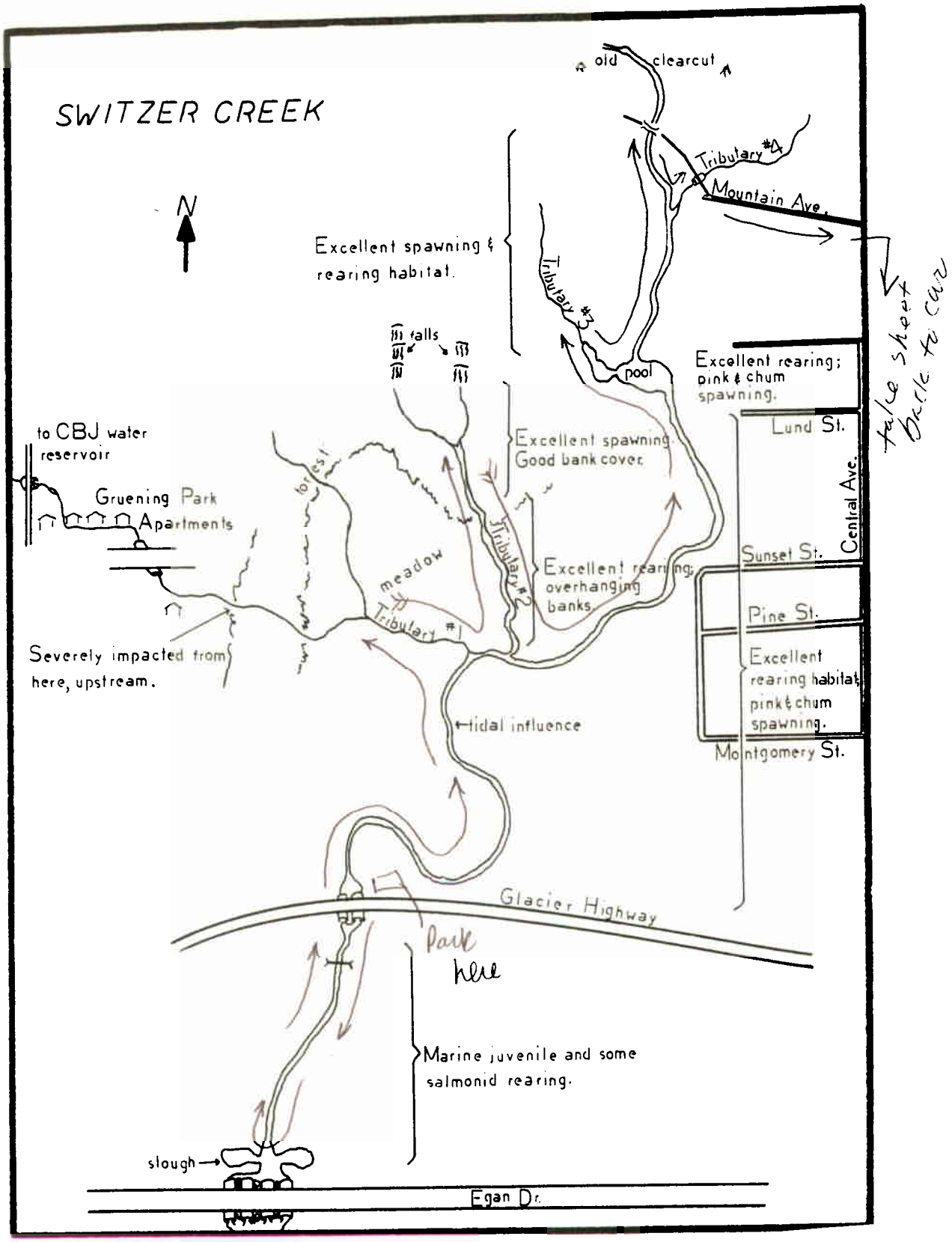


Figure 58.1. Map of Switzer Creek.

58.1

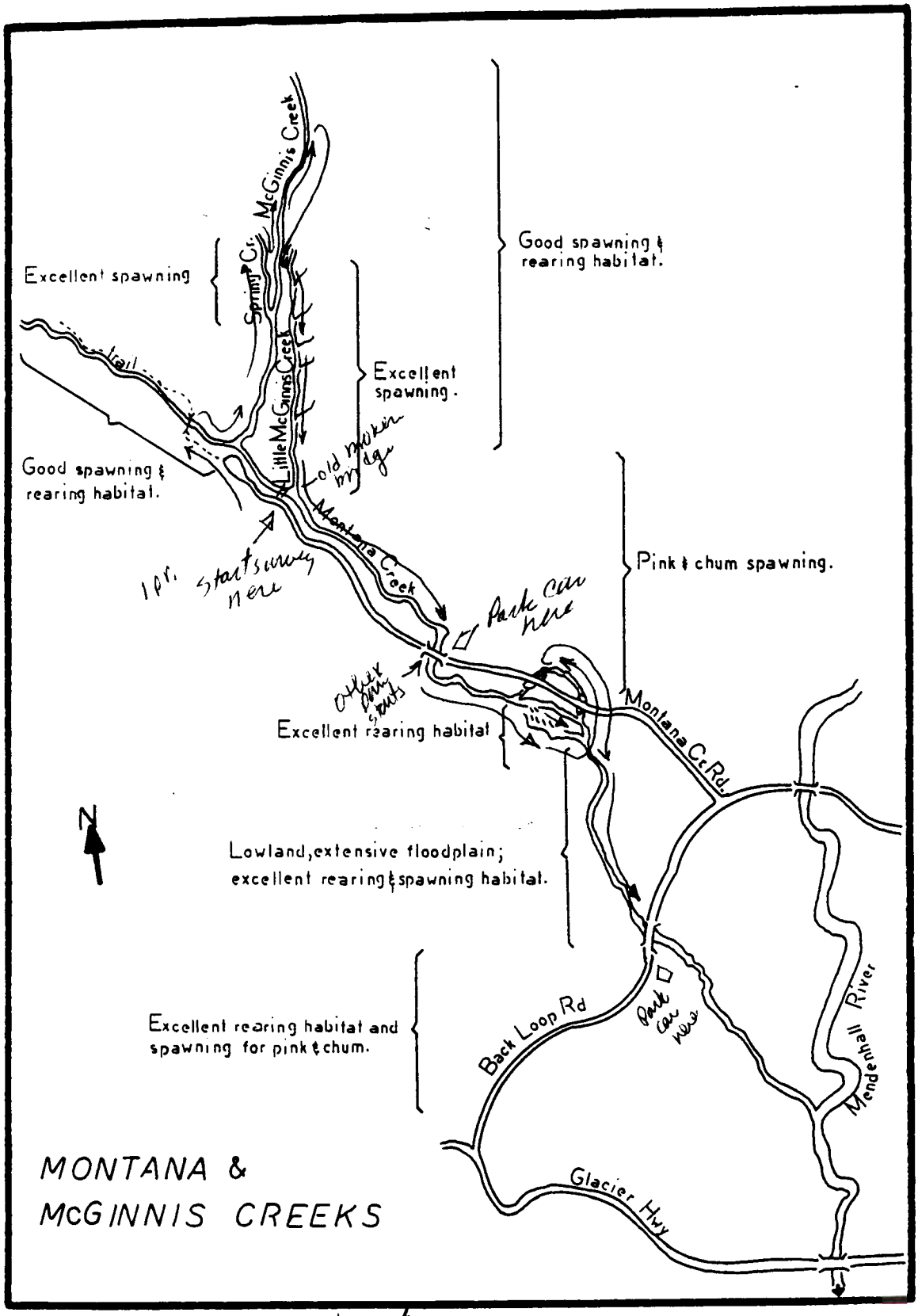


Figure 37.1. Map of McGinnis Creek.

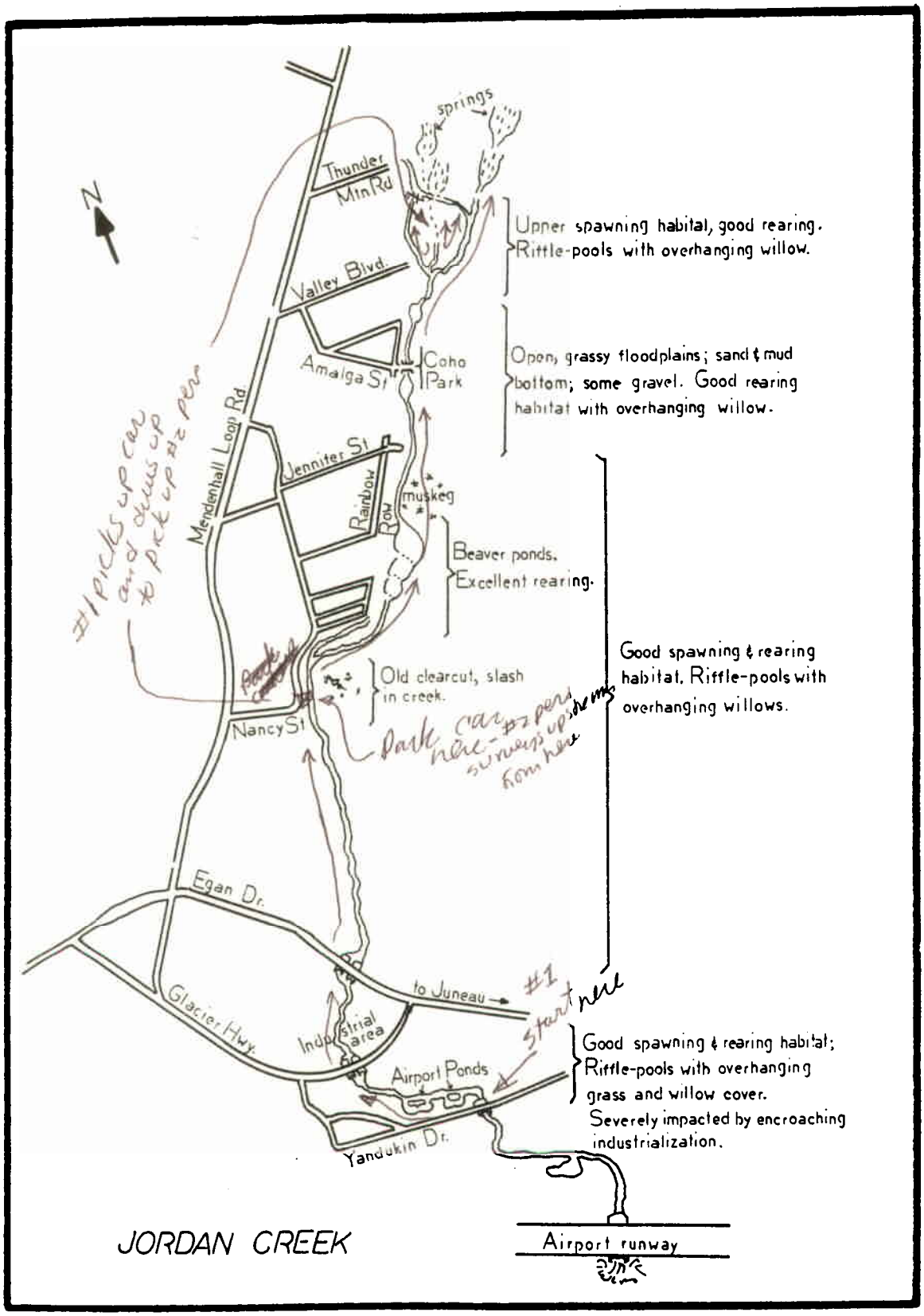


Figure 28.1. Location of Jordan Creek.

One person can survey the entire stream in 1-5 hrs. Work upstream because of heavy sediment & turbidity

MEMORANDUM State of Alaska

TO: Steve Elliott
Fisheries Biologist
Sport Fish Division
Juneau

DATE: July 18, 1987

FILE NO:

TELEPHONE NO: 766-2625

FROM: Randy Ericksen
Fisheries Biologist
Sport Fish Division
Haines

SUBJECT: Haines Coho Index Streams w/MAPS

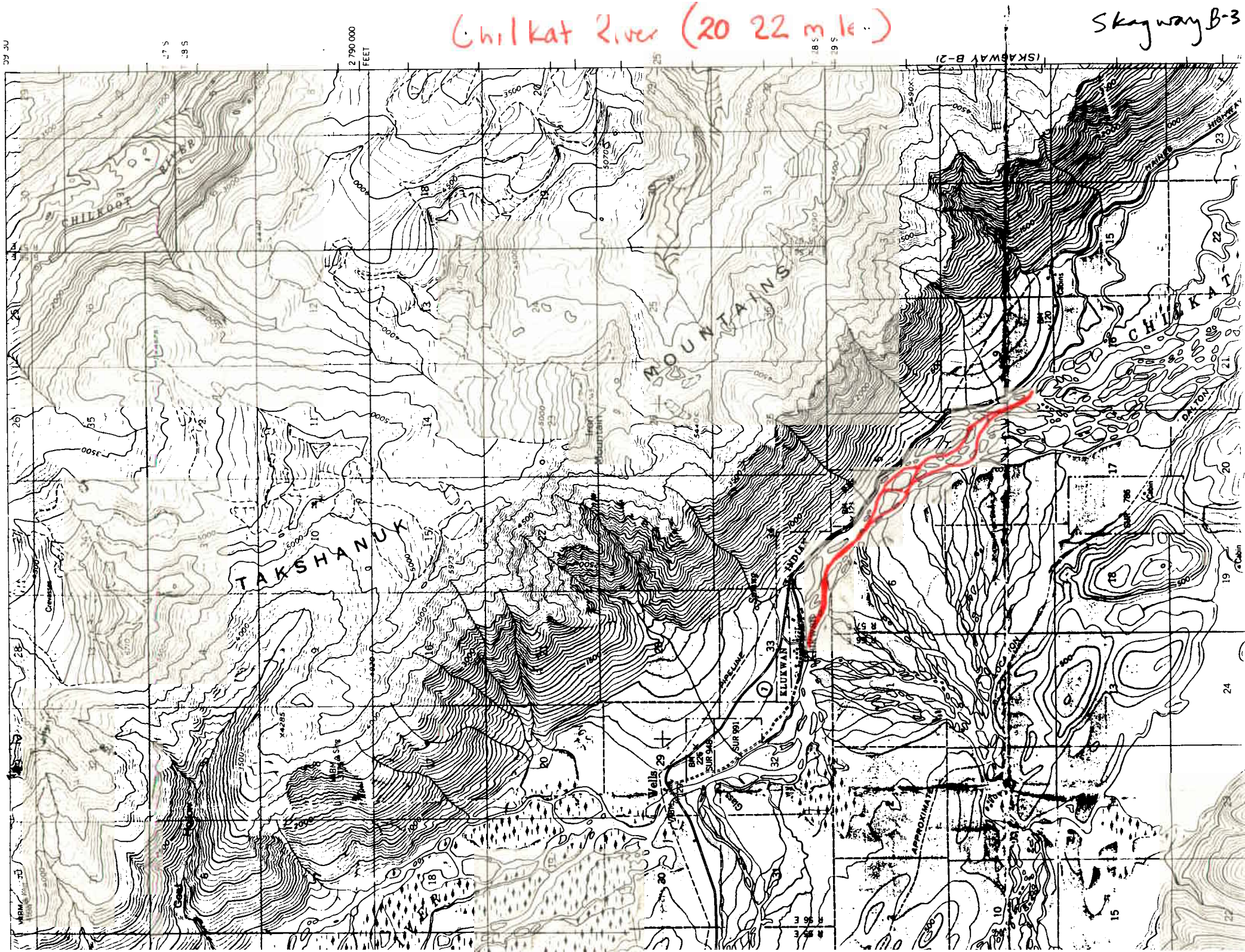
Sixty to seventy percent of my time in the fall is committed to creel surveys. Add to this my other management duties and I do not realistically have the time to conduct escapement surveys on eleven coho systems. Many of the streams surveyed in the past did not have sufficient spawners to justify the time and money involved. I recommend the following systems be used as index streams:

1. Chilkat River (20-22 mile), 115-32-10250, This system should be surveyed by air late in the fall once the river clears. Normally Ray flies this to enumerate fall chums and counts coho concentrated near the Tsirku fan. We should survey this at least one additional time.
2. Spring Creek, 115-32-10250-2019-3002-4007-5002, I normally walk this stream in mid October. It is easy to hike and always seems to have good visibility.
3. Thirtyone mile Creek, 115-32-10250-2023-3010, I walk this stream in late October. The stream has several tributaries which are all spring fed so visibility is good.
4. Kelsall River, 115-32-10250-2045, I walk this system in late October and early November once the river clears. However the water is deep and surveying conditions are not always ideal. It would be better to survey this system by air.
5. Tahini River, 115-32-10250-2057, This system is normally surveyed by foot but takes a jet boat to reach the river. Occasionally the Chilkat river gets too low to use a jet boat so we need to charter an airboat. The river itself is subject to fall flooding which makes surveys impossible. The river should be surveyed in mid to late October.
6. Clear Creek, 115-32-10280, This system is surveyed by foot but is accessed by jet boat. The creek is well up Murphy Flats on the Chilkat river and takes a sizeable tide to get to. The creek should be surveyed in late October.

I recommend you budget for one day of airboat charter (about $300) and 3hrs air charter (about $700).

Chilkat River (20 22 miles)

Skagway B-3

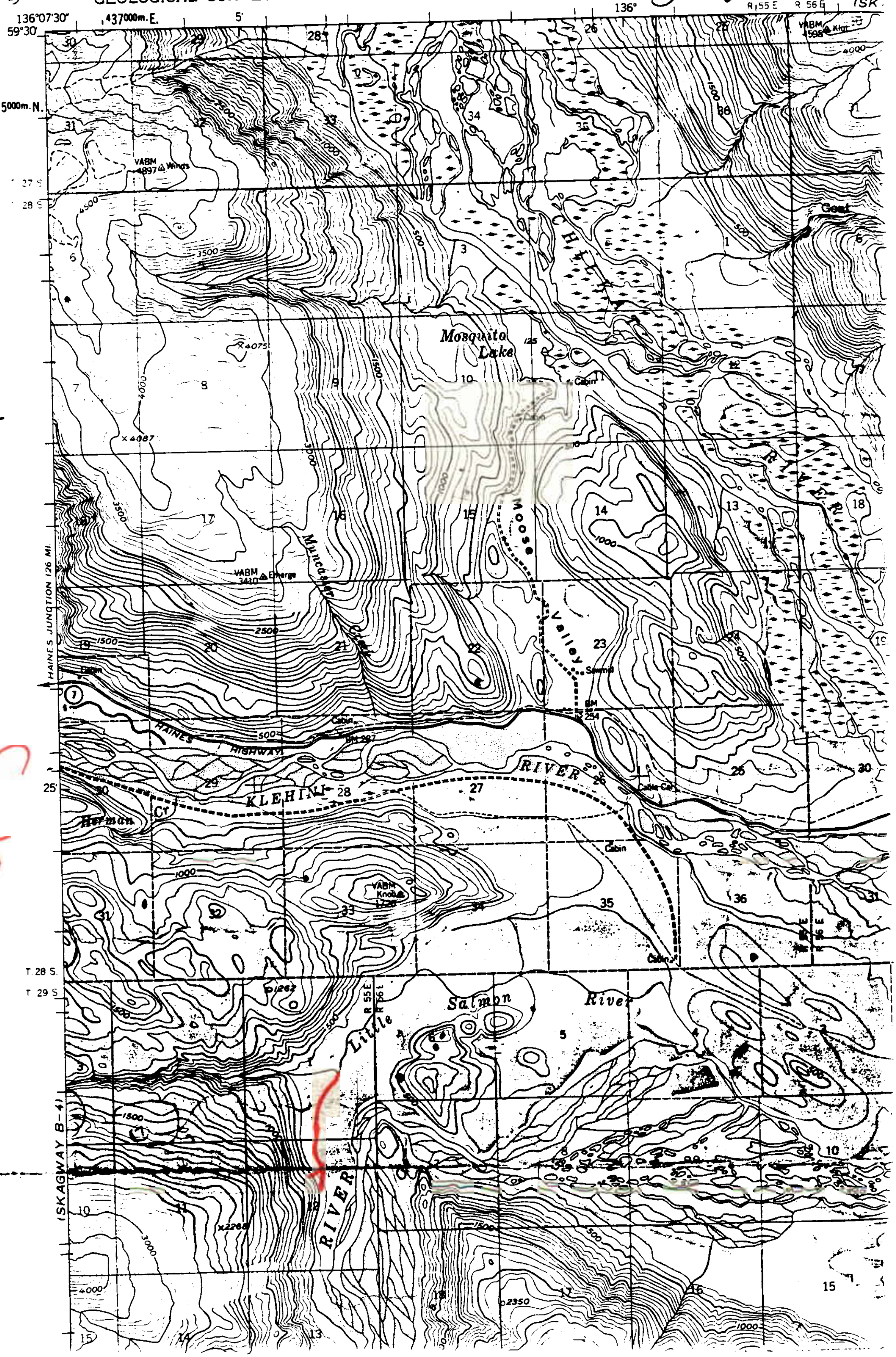


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Skagway B-3

walk from confluence with the Little Salmon, past bridge one-half mile past fork.

Spring Creek

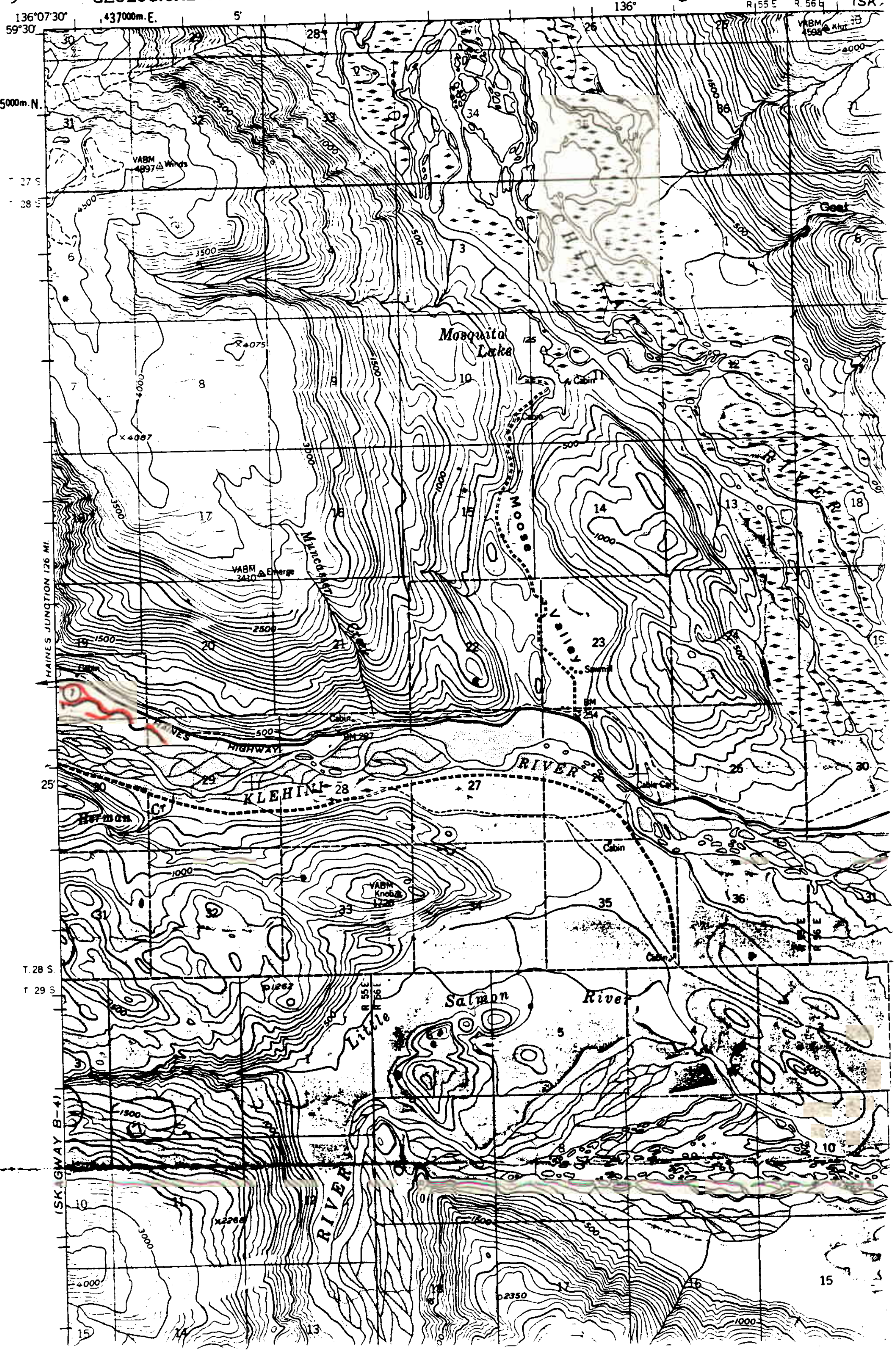


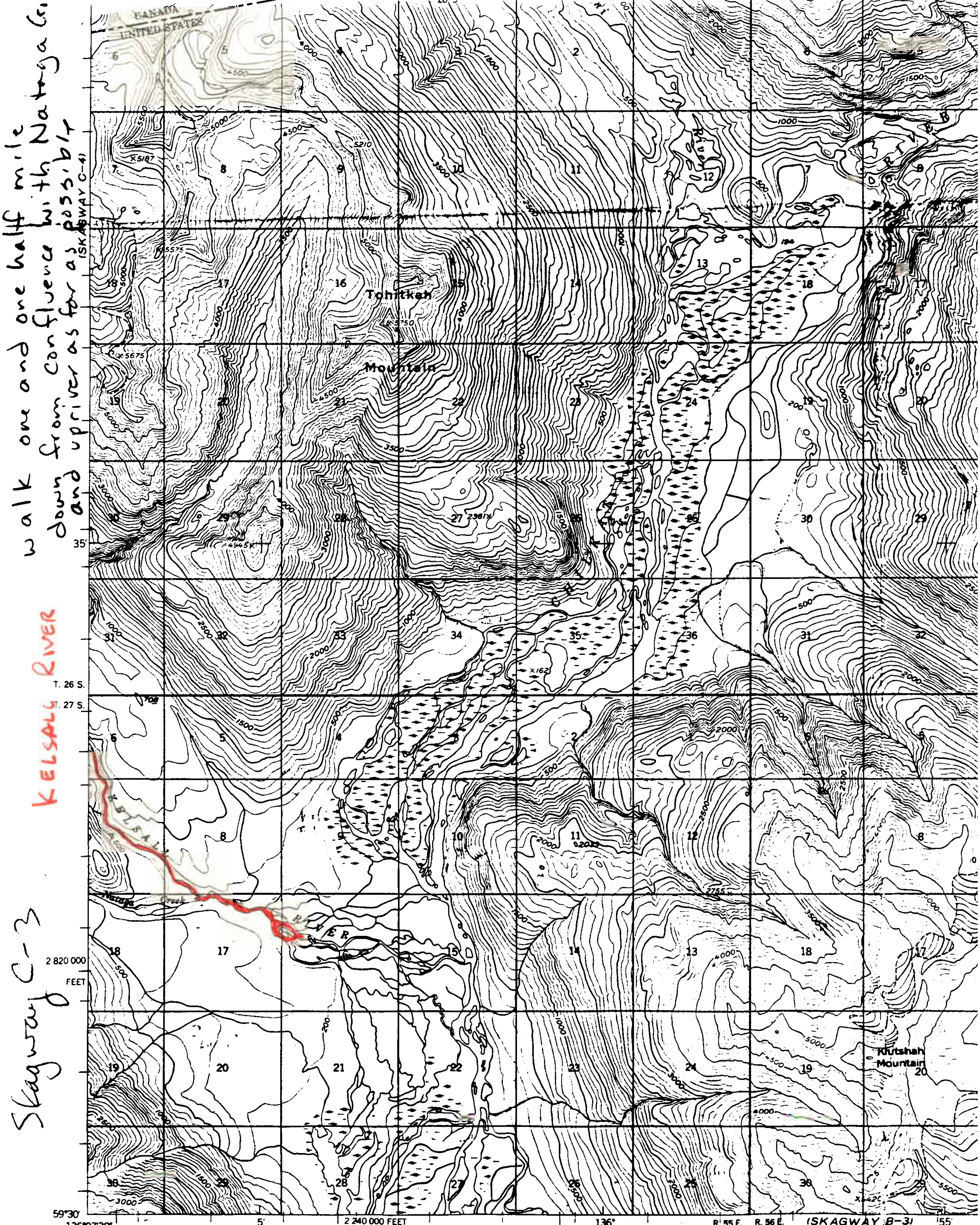
Skagway B-3

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

walk from confluence with Klehini to headwaters including tributaries.

Twentyone mile Creek





Mapped, edited, and published by the Geological Survey

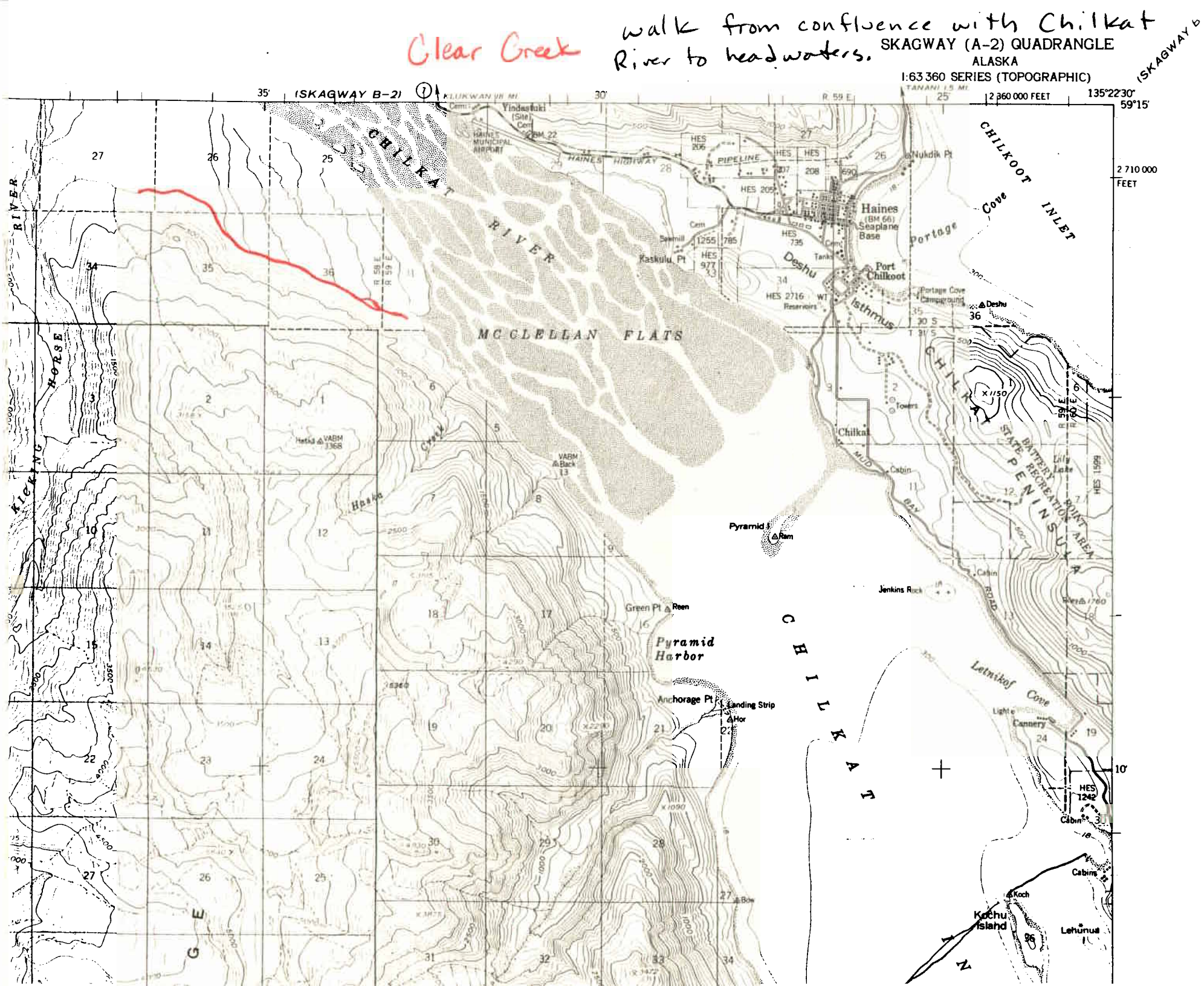
Control by USGS USC&GS, and International Boundary Commission

Skagway C-3

Survey from confluence with the Chilkat river to border

TAHINI RIVER

Clear Creek walk from confluence with Chilkat River to headwaters.



MEMORANDUM State of Alaska

TO: Gary Sanders
Acting Regional Supervisor
Sport Fish Division
Juneau

DATE: July 28, 1987

FILE NO:

TELEPHONE NO: 766-2625

FROM: Randy Ericksen
Fisheries Biologist
Sport Fish Division
Haines

SUBJECT: Coho Index Streams

In reviewing your proposed coho index streams for the Haines area, I noted several systems which had very few spawners, or were close to other index streams. I have talked with Steve Elliott and Mike Bethers about concentrating our efforts on six representative streams in the Haines area. I recommend the following systems:

Chilkat river (20-22 mile) 115-32-10250
Spring Creek 115-32-10250-2019-3002-4007-5002
31-mile Creek 115-32-10250-2023-3010
Kelsall river 115-32-10250-2045
Tahini river 115-32-10250-2057
Clear Creek 115-32-10280

I recently wrote a letter to Steve describing this in more detail. If you need more information please check with him. Ray Staska also mentioned that we should include the Takhin river 115-32-10250-2007. I have not surveyed this stream but he indicated it has a large number of spawning coho. Thank you for the opportunity to provide input on this subject.

MEMORANDUM State of Alaska

TO: Steve Elliott
Fisheries Biologist
Sport Fish Division
Juneau

DATE: 4-1-87

FILE NO:

TELEPHONE NO: 766-2625

FROM: Randy Ericksen
Fisheries Biologist
Sport Fish Division
Haines

SUBJECT: coho salmon index streams.

Sorry I didn't get back to you earlier but I just got off S.L.W.O.P. I designated six coho streams last year to be used as indices. These are Chilkat River (20-22mile), 31 mile, Kelsall River, Spring Creek, Tahini River, and Clear Creek. I recommended dropping Nataga, Bear, and Herman Creeks from survey plans due to lack of adequate numbers of spawning coho. Otherwise here goes.....

River	Survey Area	Date	Method	Notes
Chilkat River	20-22mile	11/15 - 12/15	aerial	- large nos. of coho school in this area in late fall when river clears
Chilkat River	above Tahini R. to the gorge	10/1 - 10/30	boat/aerial	- usually done in conjunction with Tahini survey
31 mile	from confluence w/Klehini to incubation boxes just past 31 milepost.	10/1 - 10/30	foot	- three branches of this creek are walked at that time.
37 mile	from confluence w/Klehini to 39mile post.	10/1 - 10/30	foot	- very brushy. spawner scattered throughout length.

continued . . . . .

River	Survey Area	Date	Method	Notes
Kelsall	bridge downstream two miles	10/15-11/15	foot	glacial system needs cool weather to survey
Little Salmon	from confluence w/ Tsirku River 1 mile upstream from Church Camp	10/1-10/30	float/foot	spawners concentrate in deep water near camp in mid Oct.
Spring Creek	from confluence w/ Little Salmon upstream past bridge and major fork.	10/1 -10/30	foot	good clear stream
Tahini River	from confluence w/ Chilkat to border	10/1 -10/30	boat/foot	glacial system but clears early. Susceptable to flooding
Clear Creek	from mouth up two miles	10/15-11/15	boat/foot	good late run

MEMORANDUM State of Alaska

TO: Steve Elliott
Fishery Biologist
Division of Sport Fish
Juneau

DATE: April 6, 1987

FILE NO:

TELEPHONE NO: 747-5355

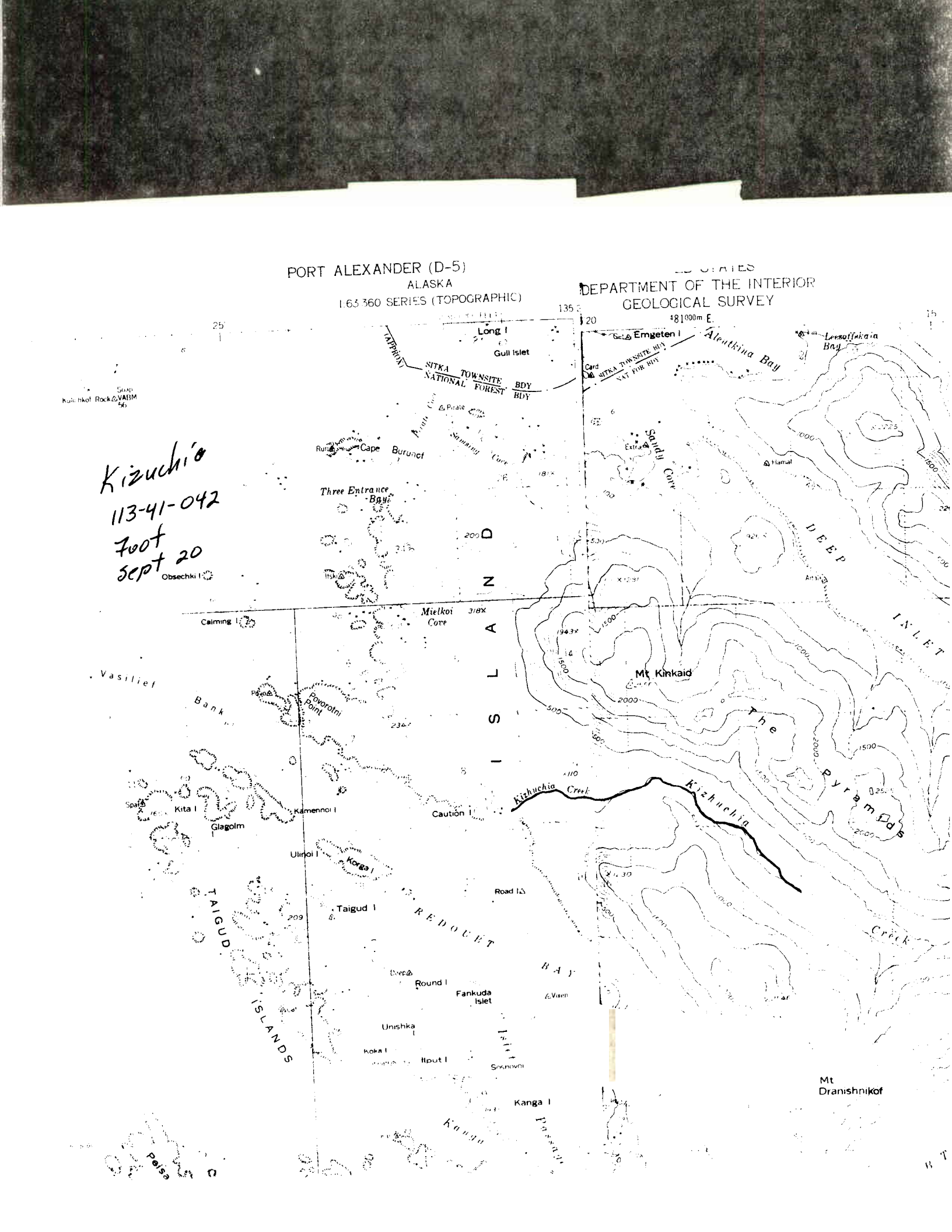
FROM: Art Schmidt AS
Fishery Biologist
Division of Sport Fish
Department of Fish and Game
Sitka

SUBJECT: Coho Index Stream Surveys
w/ MAPS (Sitka

Here are maps with areas surveyed for each coho index stream in the Sitka Area. These dates are dates of peak counts. Surveys prior to or after listed dates give lower numbers. Obviously you have to carefully choose the day to do the Black River helicopter flight, but it works quite well. I think Black River is the only system we could reliably count by helicopter. These are 1 inch = 1 mile, if you need to know the area of survey.

Salmon Lake has a weir so we only count the coho in the outlet below the weir just prior to removing the weir (usually mid-October).

Sorry this is so late.


PORT ALEXANDER (D-5)
ALASKA
1:63 360 SERIES (TOPOGRAPHIC)
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Kizuchi'a
113-41-042
foot
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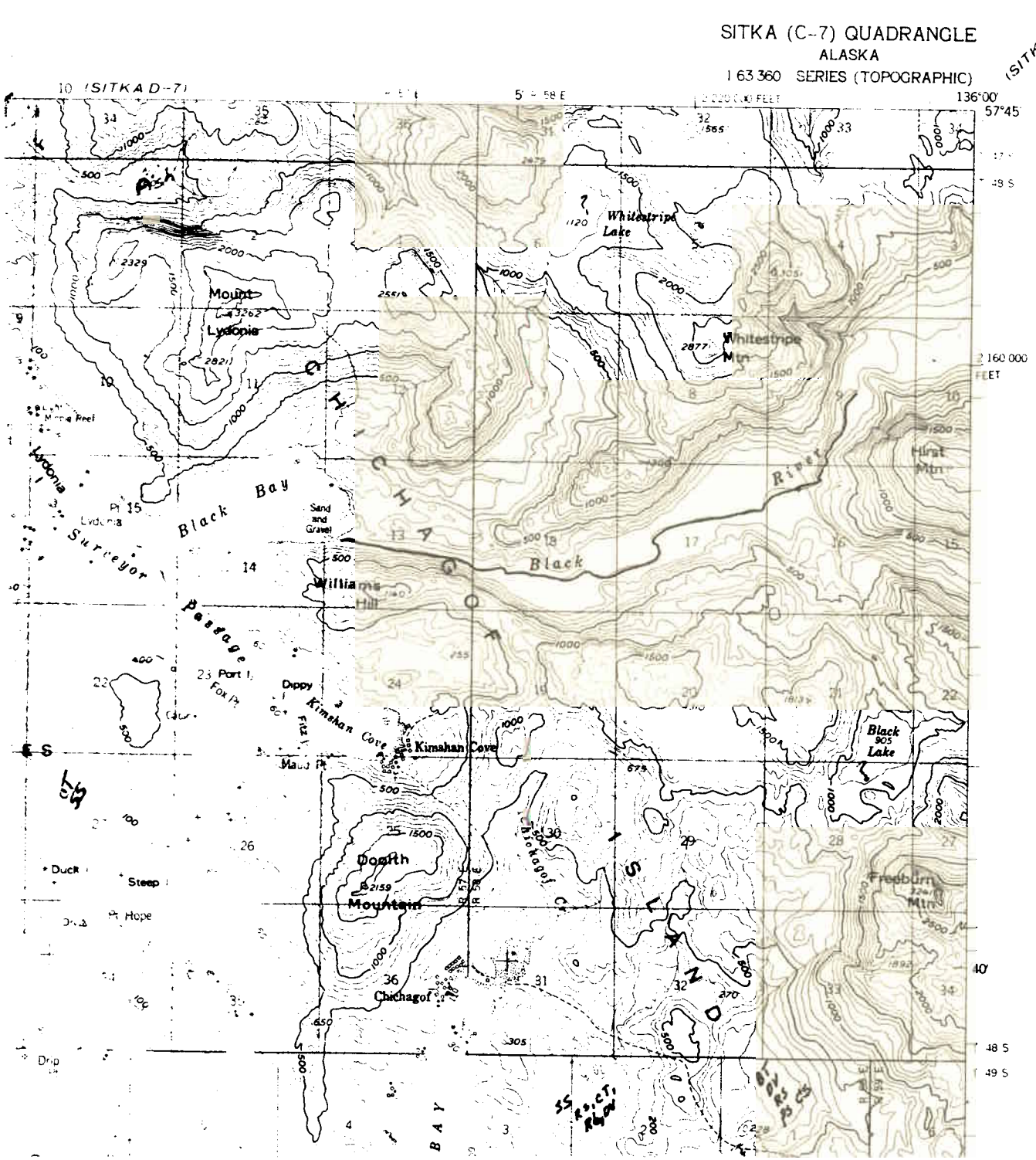
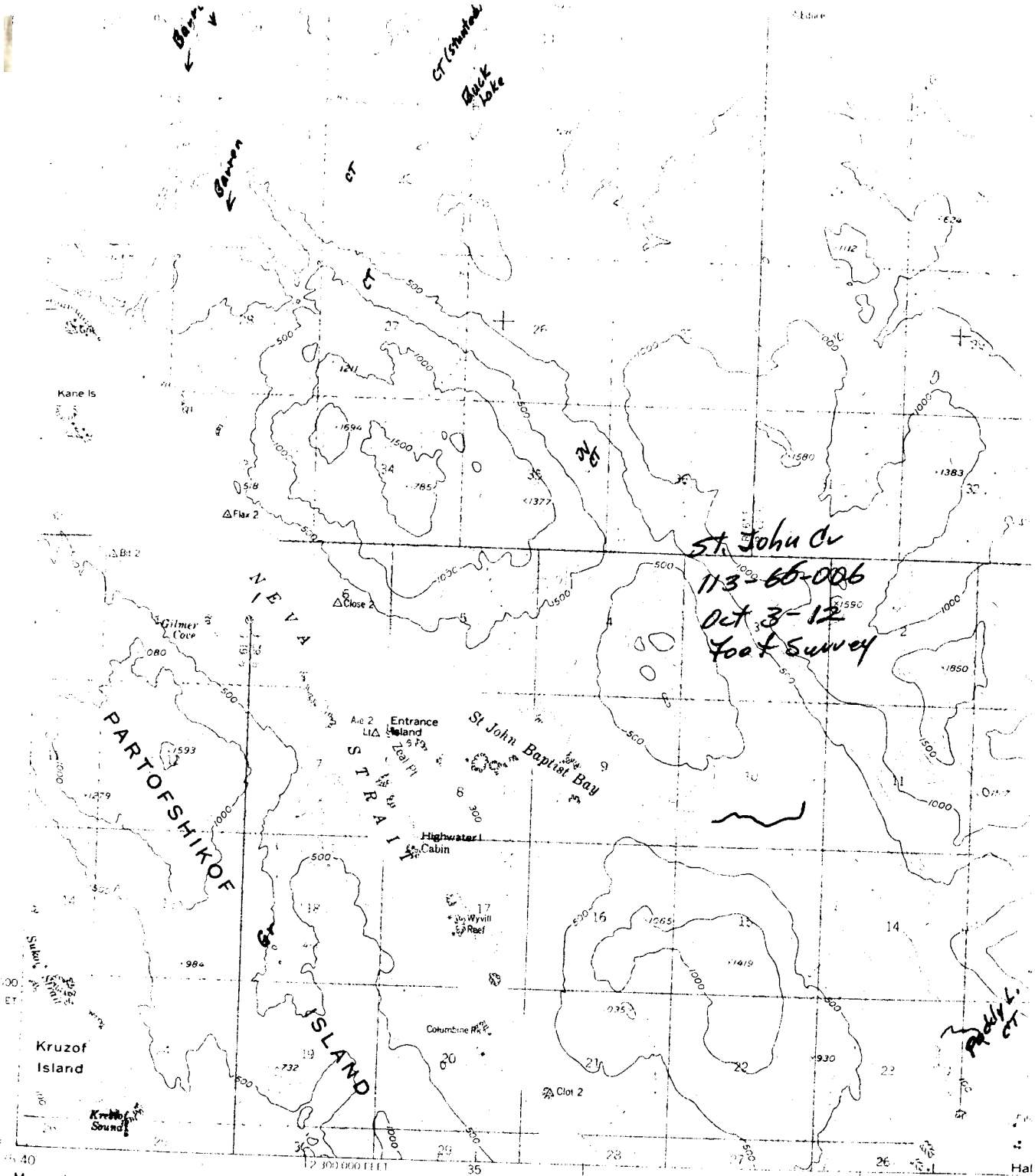
Emgeten I
Aleutkina Bay
Lesnoffskaia Bay
SITKA TOWNSITE BDY
SITKA NATIONAL FOREST BDY
Cape Burunof
Three Entrance Bay
Obsechki I
Calming I
Mielkoi Cove
Sandy Cove
Hamal
DEEP INLET
Mt Kinkaid
The Pyramids
Vasilief Bank
Povorotni Point
Kita I
Glagolm I
Kamennoi I
Caution I
Ulinoi I
Koreg I
Kizhuchia Creek
Kizhuchia Creek
Road I
Taigud I
TAIGUD ISLANDS
REDOUBT BAY
Round I
Fankuda Islet
Unishka I
Koka I
Ilput I
Kanga I
Mt Dranishnikof



Black River
Chichagof Is
Helicopter
Oct 3-10
Low H2O



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Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1948. Map not field checked

Selected hydrographic data compiled from USC&GS Charts 8248 (1962), 8281 (1960) and 8283 (1962). This information is not intended for navigational purposes

Universal Transverse Mercator projection, 1927 North American Datum 10 000-foot grid based on Alaska coordinate system, zone 1 1000-meter Universal Transverse Mercator grid ticks, zone 8, shown in blue

Land lines represent unsurveyed and unmarked locations predetermined by the State of Alaska, Division of Lands Copper River Meridian

Entire land area is within the Tongass National Forest

SCALE 1:63360

APPROXIMATE MEAN DECLINATION, 1948

CONTOUR INTERVAL 100 FEET

NATIONAL GEODETIC VERTICAL DATUM OF

DEPTH CURVES IN FEET DATUM IS MEAN LOWER LOW

SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN

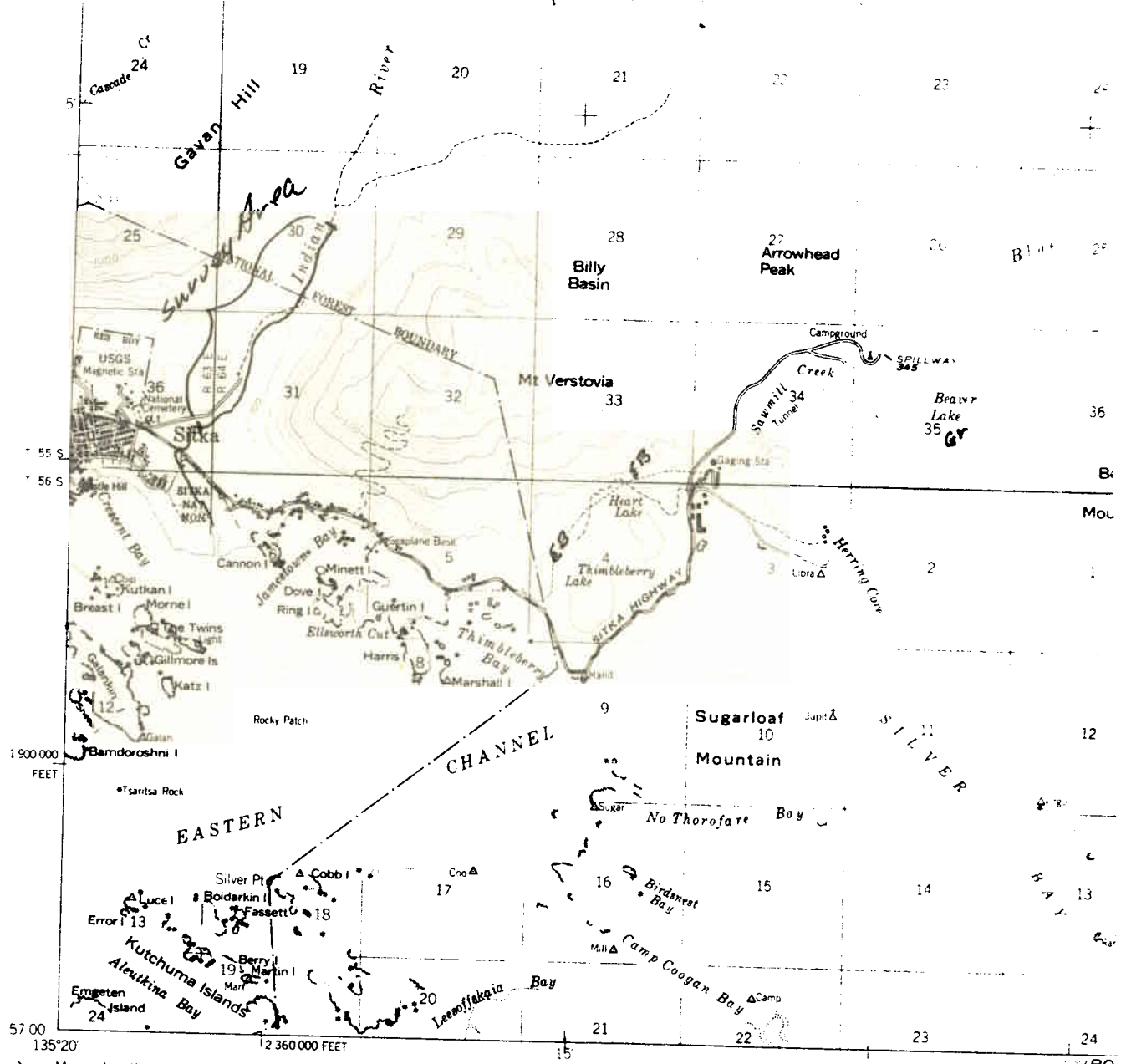
THE AVERAGE RANGE OF TIDE IS APPROXIMATELY 11 FEET

FOR SALE BY U. S. GEOLOGICAL SURVEY

FAIRBANKS, ALASKA 99701, DENVER, COLORADO 80225, OR R

A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AV

Indian River
113-41-019
10 of 25!
Dive Survey
Upstream of
Fish Ladder



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Topography by photogrammetric methods from aerial photographs taken 1948, field annotated 1951. Map not field checked

Selected hydrographic data compiled from USC&GS Charts 8244 (1952), 8255 (1948), and 8281 (1960). This information is not intended for navigational purposes

Universal Transverse Mercator projection, 1927 North American datum
10,000 foot grid based on Alaska coordinate system, zone 1
1000-meter Universal Transverse Mercator grid ticks, zone 8, shown in blue

Land lines represent unsurveyed and unmarked locations predetermined by the State of Alaska, Division of Lands, Copper River Meridian

Entire land area is within the Tongass National

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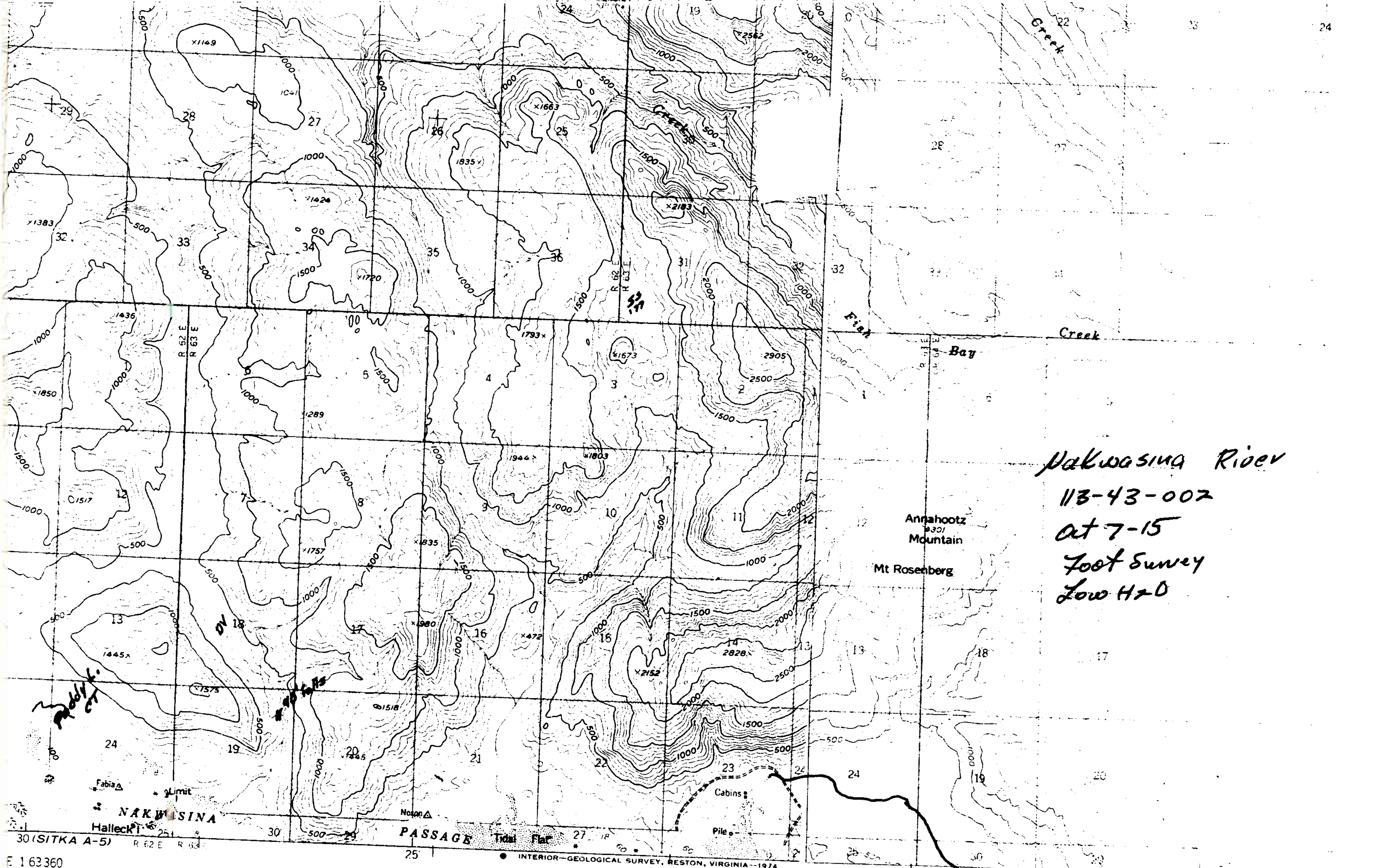
FAIRBANKS, ALASKA 99701, DENVER, COLORADO 8



E 1 63 360

4 MILES

9000 12000 15000 18000 21000 FEET

5 KILOMETERS

ERVAL 100 FEET
ERTICAL DATUM OF 1929
UM IS MEAN LOWER LOW WATER
APPROXIMATE LINE OF MEAN HIGH WATER

GEOLOGICAL SURVEY
ORADO 80225, OR RESTON, VIRGINIA 22092
S AND SYMBOLS IS AVAILABLE ON REQUEST

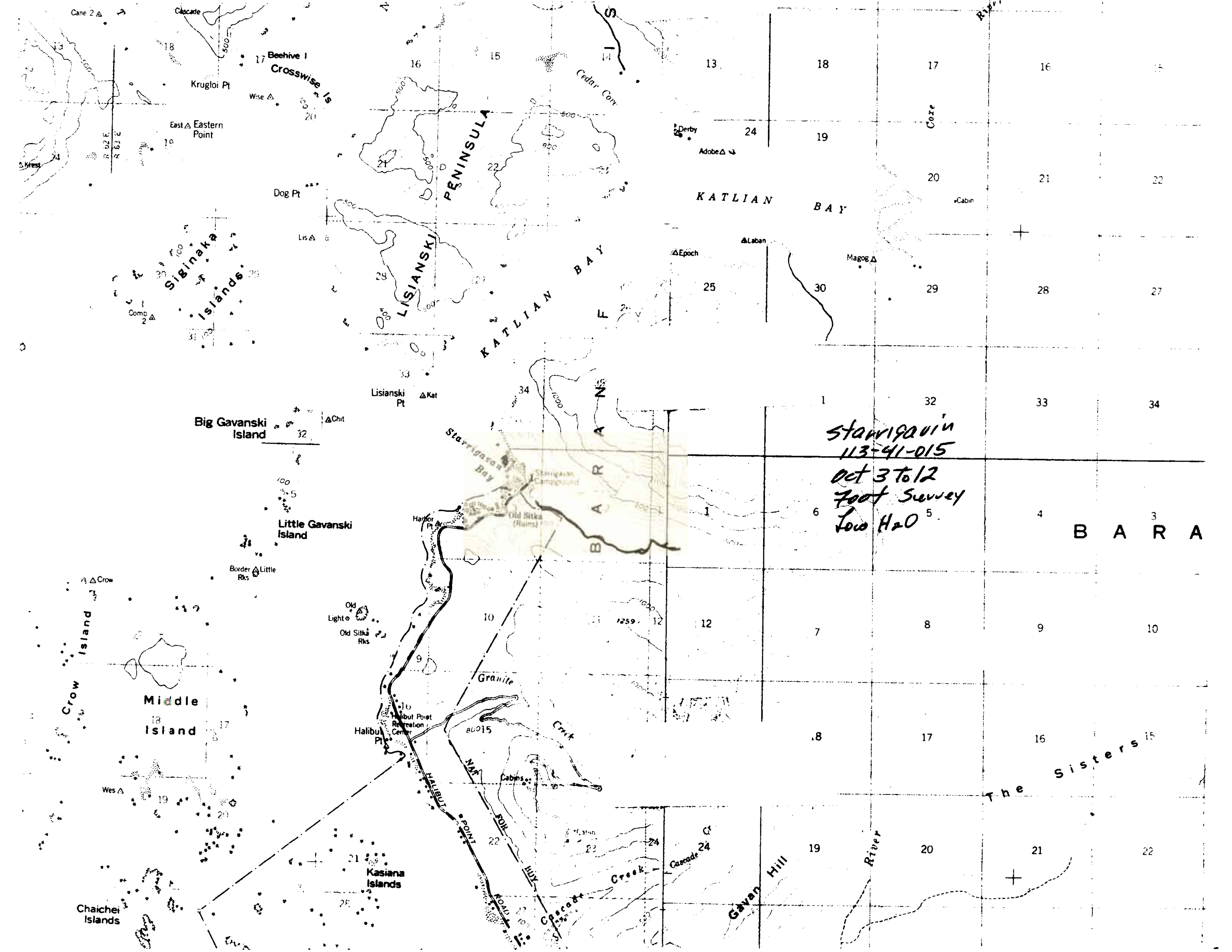
ALASKA
QUADRANGLE LOCATION

ROAD CLASSIFICATION
Unimproved dirt

SITKA

Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS
Topography by photogrammetric methods from aerial photographs taken 1948, field annotated 1951. Map not field checked
Selected hydrographic data compiled from USC&GS Charts
This information is not intended
se Mercator projection. 1927 North American datum
ased on Alaska coordinate system, zone 1

TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION


Starrigavin
113-41-015
Oct 3 To 12
Foot Survey
Low H_2O
KATLIAN BAY
LISIANSKI PENINSULA
BARA
Cedar Cove
Starrigavan Bay
Old Sitka (Ruins)
Harbor Pt
Halibut Pt
Halibut Point Recreation Center
HALIBUT POINT ROAD
NAF FOR BUY
Granite Creek
Cascade Creek
Gavan Hill
River
The Sisters
Cabins
Cabin
Big Gavanski Island
Little Gavanski Island
Border Rks
Little Rks
Old Light
Old Sitka Rks
Middle Island
Crow Island
Kasiana Islands
Chaichei Islands
Siginaka Islands
Beehive I
Crosswise Is
Krugloi Pt
Eastern Point
Dog Pt
Lisianski Pt
Derby
Adobe
Epoch
Laban
Magog
Kat
Cht
Lis
Wise
East
Comp 2
Cane 2
Cascade
Krest
Wes
Crow

Pt Leo
Coho Creek
Goloi Islands
Kruglo Is
Sinitsin Cr
113-62-008
Oct 3-12
Foot Survey
SALISBURY SOUND
Senitzen
Sinitsin I
Morskoi Rk
Sea Rock
Shark Hole Ks
Kalinin Pt
Kruzof
Pt Kruzof
Cape Georgiana
Georgia
Mt Georgiana
Lake Surprise
Scraggy Pt
Sinitsin Cove
KALININ BAY
Cabins
OCEAN
Eagle Rk
Sealion Cove
Sealion Rocks
KRUZOF ISLAND
Sealion Islands
VABM 2267 Perp
Twin Pt
Gilmer Bay
55'
50' (SITKA A-6)
45'
SCALE 1:63360
4 MILES
21000 FEET
5 KILOMETERS

To: Steve Elliott
Fishery Biologist
Sport Fish Division
Douglas

Date: August 14, 1987

File: COSUV87

From: Bob Zorich
Area Biologist
Sport Fish / FRED
Petersburg

Subject: Sport Fish Coho Surveys, Petersburg

Below is a listing of areas and times I plan to conduct coho surveys for Sport Fish Division in 1987. This schedule is tentative depending on weather conditions and conflicts with coho spawning operations at Crystal Lake Hatchery.

Stream Name ADFG Number	Area to Be Surveyed	Time 1/	Access
Bear Cr. 108-50-10030	From Three Lakes Loop Road (TLLR) bridge to tide water.	Oct. Q1, Q3 Nov. Q1	One person: road access
Crystal Cr. 106-44-10310	Hatchery rack returns.		
Falls Creek 106-44-10060	From TLLR bridge to Mitkof Highway bridge. If second person is available, a survey from TLLR bridge up stream will be conducted.	Oct. Q1, Q3 Nov. Q1	One or Two people: road access
Ohmer Cr. 108-40-10500	From upper inter-tidal to one mile above right fork and one mile above left fork.	Oct. Q1, Q3 Nov. Q1	One person: road access
Petersburg Cr. 106-44-10600	From Petersburg Lake to upper inter-tidal.	Oct. Q2, Q4 Nov. Q2	One or two people: plane and boat
Sumner Creek:	From bridge to barrier one mile up stream. Will survey this stream same day Ohmer Creek, time permitting.	Oct. Q1, Q3 Nov. Q1	One person: road access

1/ Legend: Q1- first quarter of month, Q2- second quarter of month
Q3- third quarter of month, Q4- fourth quarter of month

I will be working with the Commercial Fisheries staff in Petersburg to coordinate these surveys with their's. They plan to assist me when possible and I will assist them on their surveys when possible. I will send you a list of the Commercial Fish survey plans as soon as they are available.

xc: Larson, R.
Sanders
Sele

To: Leon Shaul
Commercial Fisheries
Douglas

Date: September 4, 1987

From: Robert Larson
Commercial Fisheries
Petersburg

Subject: Coho Streams

The following is a list of streams in the Petersburg/Wrangell management area we are planning on surveying for coho escapements this fall.

Name and Number	Methods
Bear Creek 108-50-03	Also on the sport fish list of target systems. Normally walked from the Three Lakes Loop Road bridge to the forks, up Canyon Creek to the falls and back to the road; the mainstem to saltwater may also be included depending upon conditions. This is a two person/two vehicle operation. Can be done in 1 day. Cost: no additional cost.
Falls Creek 106-44-06	Also on the sport fish list of target systems. Normally walked from the Three Lakes Loop Road bridge downstream to the Mitkof Higway bridge. The area above the upper bridge has not been previously walked but coho distribution in this area should be documented. Two persons/two vehicles required for one day. Timing: mid October peak. Cost: No additional cost.
Sumner Creek 108-40-40 Ohmer Creek 108-40-50	Located on the southeast portion of Mitkof Island. Also on the sport fish list of target systems. This end of Blind Slough has been the site of a remote release coho and chinook site with an intense commercial gillnet fishery at the mouth. The hatchery will no longer release coho at this site and did not release chinook there this spring. If there are no additional hatchery releases, these would be two small streams that should be included. A low priority as long as the area is flooded with chinook fry from naturally spawning adults or coho fry from Crystal Lake Hatchery.
Stikine River North Arm Ck. 108-40-10 Shakes Slough 108-40-13 Ketili Creek 108-40-14 Katete Creek 108-70-09 Kikahe River 108-40-16	Helicopter surveys can be done on one tank of fuel if conditions are good. Should be done 3 times during the fall; late September, early October, and late October. Sites such as Ketili Creek (Barnes Lake) will need to be evaluated this year, and decisions made to decide their suitability as index sites. Cost: $1800 per trip = $5400
Goat Creek 108-40-17	
Shuktusa Creek 108-40-18	
Andrews Creek 108-40-20	

Marten Creek 107-40-38 Harding River 107-40-49 N. Bradfield R. 107-40-52 E. Bradfield R. 107-40-53	Longer streams located in Bradfield Canal. Helicopter survey from Petersburg surveyed once with timing determined by Stikine River surveys. Due to light conditions in late October, these will be done on a separate day from the Stikine River. One person/one day. Timing: Dependent upon Stikine (mid-late October) Cost: 2.5 hrs. flight time @ $542 = $1355.
Mosman Creek 106-22-06 Navy Creek 106-22-16	South Etolin Island streams. These are new to our proposed survey list. Survey possible with floatplane or helicopter transportation and streams walked. Each system has a barrier falls and could be walked in 2 or 3 hours less using the helicopter. Timing: walked previously in mid September. Cost: Fixed wing = $400 plus 1 hr standby @ $120 = $520; Helicopter = 1.5 hrs. flight time @ $542 plus 1 hr. standby @ $125 = $940
109-42-40 (Port Camden) 109-45-10 (Security Bay) 109-52-08 (Rowan Bay)	These three streams are located on the northwest portion of Kuiu Island and can be accessed by vehicle from the Rowan Bay logging camp. The barrier falls and road routes are shown on the attached map. The first year I recommend using a helicopter for one trip to delineate the portions of the streams we want to use as our index areas and plan on walking only what we can do in two days. A forest service truck and bunkhouse is available in Rowan Bay for our use. Cost: Fixed wing; round trip to Rowan Bay @ $330 plus $50 board; Helicopter = 2.5 hrs. flight time @ $542 = $1355.
Kake Bake 105-32-20	Kupreanof Island. New to survey list. NMFS coho research site with several years of escapement data. Access by road from Kake. Two persons/one day. U.S.F.S. vehicle available for use in Kake. Cost: $90 round trip per person to Kake = $180. $80 per diem if overnight = $160. One time cost for 1987 helicopter .5 hr. flight time = $275.
Duncan Creek 106-43-75	Kupreanof Island. New to survey list. Skiff access from Petersburg. Helicopter survey of this and adjacent streams required for 1987 for distribution. Timing: mid September-October; Cost: No additional costs when done by skiff. Helicopter: one time cost for 1987; 1 hr = $542.00.
Portage Creek 110-16-02	Alternate survey site can be accessed by fixed wing or helicopter located in Portage Bay on the north side of Mitkof Island. Walk from falls to saltwater. Cost: 1987 1 hr. helicopter time = $542.00

Snake Creek 107-30-70	Alternate survey site can be accessed by skiff from Wrangell. Located on Etolin Island. It's known locally for a good coho return. Walk from the falls to tidewater. Two people for 1 day. Cost: skiff access; $80 per diem; $70 airfare Petersburg to Wrangell; Helicopter - additional .5 hr flight time for Mosman and Navy Creek flight = $275

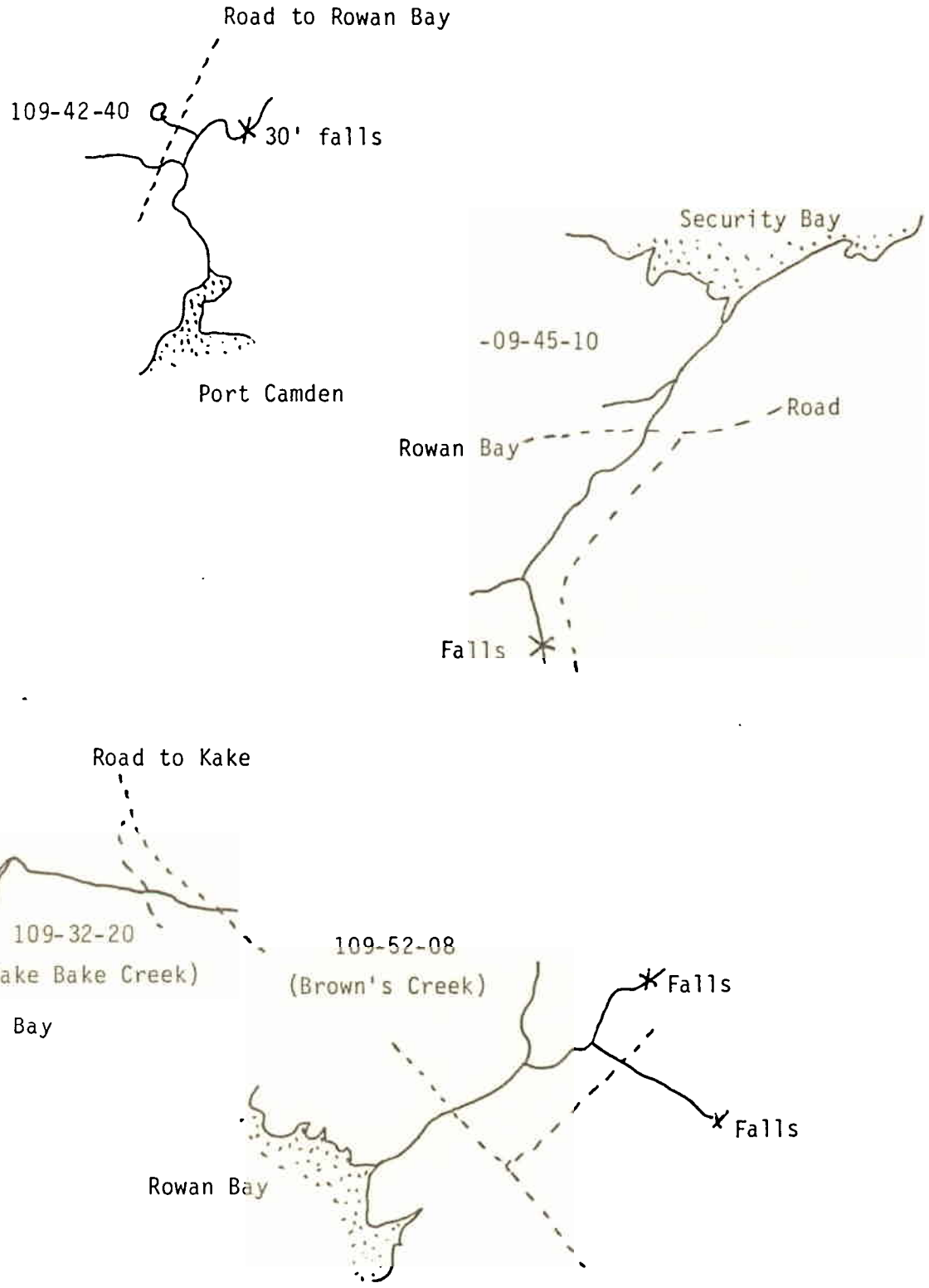
Cost Summary

	1987	Future Years
Petersburg Road System	-0-	-0-
Stikine River	$5400	$5400
Bradfield Canal	$1350	$1350
Etolin Island	$1215	$520
Rowan Bay	$1355	$380
Kupreanof Island	$2199	$340
Total	$11,524	$8,025

Amount Available: Comm Fish - $8,700
Sport Fish- $2,000

$10,700

cc: Steve Elliott
Randy Timothy
Robert Zorich


Road to Rowan Bay
109-42-40
30' falls
Port Camden
Security Bay
-09-45-10
Road
Rowan Bay
Falls
Road to Kake
109-32-20
(Kake Bake Creek)
Big John Bay
109-52-08
(Brown's Creek)
Falls
Falls
Rowan Bay
N

MEMORANDUM

State of Alaska

TO: Jeff Kelly

DATE: 7/15/88

FILE NO:

TELEPHONE NO:

FROM: Gordie Woods

SUBJECT: 1987 yakutat coho escapement

Jeff.

Attached are the escapement counts for 1987. Counts we have for coho are partial, and, as you will note, in some cases we got no count at all. You will see why if you glance at the precipitation record. We basically have no idea what the coho escapement was last year!

Gordie

02-001 (Rev.10/79)

WEATHER - 1987

A very wet winter, spring, and early summer left area systems full of water, and smolt survival and outmigration should have been good and on time. Total snowfall for the 1986-1987 winter was only 111 in., 47% below average. During the nine month period, October, 1986, through June, 1987, every month was above average in precipitation. Rainfall of 18.34 in. in June was the highest ever recorded for that month. July and August then set records for dryness for those two months, respectively. Juvenile mortality was very heavy during this time as many area streams dried up. Fry rescue operations were performed on Ophir Creek. Low water conditions also affected adult migrations. Humpback Creek water level was low enough to prevent pinks from entering for several weeks in August. The commercial opening on the Tsiu River was delayed as coho entering the river had to hold within the fishery area because low water conditions prevented them from entering the lake. September set an all-time single month record for precipitation as 48.33 in. of rain fell during that month. Area-wide flood conditions benefited coho escapement as gear efficiency was greatly reduced under those conditions. September's record was then erased in October as 48.37 in. of rain fell by the 27th of that month. Most coho surveys were flooded out in September and October, and for the rest of the year as well. Total precipitation for 1987 was 251 inches, making this the wettest year on record for Yakutat.

YAKUTAT PRECIPITATION AND SNOWFALL

JANUARY - DECEMBER 1987

MONTH	TOTAL PRECIP. (in.)	TOTAL SNOWFALL(in.)	PRECIP. DEVIATION FROM NORMAL(in.)	REMARKS
January	22.95	31	+13.56	
February	14.50	10.3	+ 4.45	33.7° mean temp., 6° above average.
March	11.36	12.7	+ 1.81	
April	15.90	9.7	+ 7.28	
May	15.07	T	+ 5.95	
June	18.34	Ø	+12.78	Record wet June.
July	1.86	Ø	- 6.4 1/	Record dry July.
August	2.42	Ø	- 7.64 2/	Record dry August.
September	48.33	Ø	+32.33 3/	Record wet September.
October	48.81	Ø	+28.69 4/	Record wet October.
November	28.55	5.1	+13.05	
December	23.16	44.0	+10.18	22 in. snow in 2 days
1987 ANNUAL TOTAL	251.29		+115.8	New record wet year.

TOTAL 1986-1987 SEASON SNOWFALL 111.7 in.
(Nov. 1986-April 1987)

1/ Record dry July, very heavy fry loss.

2/ Record dry August, very heavy fry loss continues.

3/ Wettest month on record for Yakutat - then record broken by October 1987.

4/ On October 21, record broken for October (previous was 36.45") and for any one year (previous record was 187.8" in 1965). New wettest month on record for Yakutat.

ALSEK RIVER WEEKLY CATCH DATA - 1987

WEEK	DATE	BOATS	KING	RED	COHO	PINK	CHUM	TOTAL	DAYS
24	6/13	18	16	407				423	.5
25	6/20	24	206	3,578				3,784	2.0
26	6/27	27	106	2,326				2,432	3.0
27	7/04	23	17	1,292				1,309	2.0
28	7/11	18		1,256			1	1,257	1.0
29	7/18	18		1,128				1,128	2.0
30	7/25	CLOSED							
31	8/01	3		388				388	1.0
32	8/08	4		427				427	1.0
33	8/15	7		341	5		4	350	1.0
34	8/22	4		115	26		5	146	3.0
35	8/29	5		29	68		3	100	3.0
36	9/05	4		8	56		4	69	3.0
37	9/12	1		1	2		1	4	4.0
38	9/19	9		2	741		440	1,183	4.0
39	9/26	7			960		752	1,712	4.0
40	10/3	5		1	679		712	1,392	4.0
TOTAL:		177	345	11,299	2,537		1,922	16,102	38.5

5 YEAR COMPARISON

1982	25R,10coho	532	27,389	6,534	6	357	34,811	42
1983	20R,11coho	77	19,131	5,661	7	299	25,175	40
1984	22R,11coho	60	14,409	7,854	23	1,354	23,677	33
1985	18R, 6coho	212	5,603	5,674	8	423	11,920	33
1986	26R,11coho	476	24,164	1,331	13	537	26,521	34
1987	27R, 9coho	345	11,299	2,537	0	1,922	16,102	38.5

ESCAPEMENT

DATE	AREA	KING	RED	COHO	REMARKS
7/23	Tanis #1		100		Aerial
7/23	Tanis #2		0		Aerial
8/10	Tanis #1		1,200		Aerial
8/10	Tanis #2		400		Aerial
8/14	Basin Creek		350		Aerial
8/14	Cabin Creek		220		Aerial
8/14	Clues Creek		0		Aerial
8/14	Emile Creek		0		Aerial
8/14	Williams Creek		0		Aerial

ALSEK RIVER ESCAPEMENT

DATE	AREA	KING	RED	COHO	REMARKS
10/9	Cabin Creek			0	Aerial
10/9	Gines Creek			0	Aerial
10/9	Emile Creek			100	Aerial
10/9	Williams Creek			0	Aerial
10/29	Klukshu Weir	2,616	10,504		Final count, weir removed on 10/16

EAST RIVER WEEKLY CATCH DATA - 1987

WEEK	DATE	BOATS	KING	RED	COHO	PINK	CHUM	TOTAL	DAYS
24	6/13	8	2	122				124	.5
25	6/20	7	14	77				91	2.0
26	6/27	9	7	547				554	3.0
27	7/04	14	1	626			3	630	2.0
28	7/11	27	15	4,313	1		1	4,330	2.0
29	7/18	31	16	7,911	1		1	7,929	2.0
30	7/25	60	13	19,600	1	25	5	19,644	3.0
31	8/01	74	9	32,580	13	47	14	32,663	3.0
32	8/08	89	15	37,566	24	26	43	37,674	4.0
33	8/15	59	3	15,220	33	15	160	15,431	4.0
34	8/22	51	3	10,225	319		1,354	11,901	3.0
35	8/29	21		4,218	1,340		3,269	8,827	3.0
36	9/05	16		604	883		3,034	4,521	3.0
37	9/12	10		50	343		621	1,014	4.0
38	9/19	11		39	867		1,421	2,327	4.0
39	9/26	7		23	968		546	1,537	4.0
40	10/3	4		2	341		53	396	4.0
TOTAL:		494	98	133,723	5,134	113	10,525	149,593	50.2

5 YEAR COMPARISON

1982	40R,12coho	81	97,785	2,026	428	4,668	104,988	40
1983	52R,14coho	30	82,204	4,891	273	9,566	96,964	29.5
1984	48R,15coho	22	39,023	10,875	851	22,419	73,190	27.5
1985	66R,19coho	67	185,851	8,148	801	10,576	206,143	42
1986	78R,28coho	109	76,355	2,769	332	14,285	93,850	28
1987	89R,16coho	98	133,723	5,134	113	10,525	149,593	50.2

ESCAPEMENT

DATE	KING	RED	COHO	PINK	CHUM	REMARKS
6/04	33	1,500				Aerial
6/07		1,600				"
7/03		1,300				"
7/08		1,700				"
7/12		6,300				"
7/15		5,500				"
7/19		5,500				"
7/23		8,000				"
7/26		10,300				"
8/02		17,300				"
8/10		24,000				"
8/14		25,000				"
8/17		29,500			600	"
8/25		34,000				"

EAST RIVER ESCAPEMENT - 1987 (continued)

DATE	AREA	RED	COHO	CHUM	REMARKS
10/9	East River	25,000			Aerial
10/9	Doame River		1,300		Aerial
10/9	Dog Salmon Creek			50	Aerial

AKWE RIVER WEEKLY CATCH DATA - 1987

WEEK	DATE	BOATS	KING	RED	COHO	PINK	CHUM	TOTAL	DAYS
26	6/27	5	145	209				354	1.5
27	7/04	10	24	1,692			3	1,719	1.5
28	7/11	12	7	3,660		1	1	3,669	1.5
29	7/18	10		2,533		3	9	2,545	2.5
30	7/25	11	7	2,501			27	2,535	1.5
31	8/01	7		864			34	898	1.5
32	8/08	2	1	278			10	289	2.0
33	8/15	3		157	5	3	36	201	2.0
34	8/22	2	4	161	13	9	79	266	2.0
35	8/29	5	1	55	389	16	112	573	3.0
36	9/05	10	1	19	1,387		147	1,554	3.0
37	9/12	1			13			13	4.0
38	9/19	8			1,633		37	1,670	4.0
39	9/26	9		4	3,684		17	3,705	4.0
40	10/3	9			821		1	822	4.0
TOTAL:		104	190	12,133	7,945	32	513	20,813	38.0

5 YEAR COMPARISON

1982	9	129	4,971	7,014	129	82	12,325	23.5
1983	6	93	5,687	5,282	151	73	11,286	30.0
1984	8	143	17,706	8,837	1,027	662	28,375	23.25
1985	9	135	4,938	4,044	19	45	9,181	21.0
1986	15	337	9,497	8,635	41	99	18,609	32.5
1987	12	190	12,133	7,945	32	513	20,813	38.0

ESCAPEMENT

DATE	KING	RED	COHO	REMARKS
7/03		0		
7/08		300		
7/12		300		
7/19		500		
7/23		500		
7/26		800		
8/02		200		
8/10	160	100		Kings below lake outlet, reds in Swanson Creek

ITALIO RIVER ESCAPEMENT - 1987

DATE	AREA	RED	COHO	REMARKS	
6/04	New Italio	500		Aerial	
7/03	New Italio	200		Aerial	
7/08	New Italio	600		Aerial	
7/12	New Italio	1,500		Aerial	
7/15	New Italio	250		Aerial	
7/19	New Italio	1,700		Aerial	
7/21	Old Italio	25		Aerial	
7/23	New Italio	1,500		Aerial	
7/26	New Italio	1,200		Aerial	
8/02	New Italio	3,250		Aerial	150 Reds in lake
8/10	New Italio	6,000		Aerial	400 Reds in lake
8/25	Italio Lake	300			
9/05	New Italio		100	Aerial	
9/11	New Italio		0	Aerial	
10/9	Italio Lake	100		Aerial	
10/9	New Italio		400	Aerial	
10/9	Middle Italio		1,000	Aerial	
10/9	Old Italio		240	Aerial	

SITUK - AHRNKLIN ESCAPEMENT SURVEYS
(NON-MAIN STEM SITUK RIVER)

DATE	AREA	RED	COHO	PINK	REMARKS
7/12	Sockeye Creek	350			Foot, at FH10
7/12	Antlen	150			Foot, at FH10
7/15	Old Situk	0			Foot
7/16	West Fork	50			Foot
7/17	Antlen	6,100			Foot, boat
7/18	Antlen	74			Foot, at FH10
7/18	Sockeye Creek	600			Foot, at FH10
7/21	Mountain Stream	2,000			Aerial
7/21	Mountain Lake	10,000			Aerial
7/30	Sockeye Creek	8,450			Foot
8/08	Mountain Lake	4,000			Boat
8/08	Mountain Stream	2,400			Foot
8/09	West Fork	120			Foot
8/15	West Fork	278			Foot
9/02	Old Situk	1,910		800	Foot
10/7	Old Situk	12	1,010		Boat, 12 chum
10/9	Antlen		300		Aerial

SITUK RIVER FLOAT COUNTS
(MAIN STEM - 9 MILE BRIDGE TO SITUK LANDING)

DATE	KING	RED	COHO	PINK	REMARKS
6/09	3	35			
6/10		200			Lower one mile
6/16	45	2,040			
6/23	7	300			Dark water, poor visibility
6/27	266	3,800			
7/01	681	11,780			
7/06	768	21,130			Poor visibility
7/10	30	2,100			Lower 2.5 miles
7/14	1,055	10,110			
7/16		3,100			Lower 2.0 miles
7/20	1,439	14,470		3,000	
8/19	85	2,300	170	24,000	
8/27		1,000	2,000		

LOST RIVER WEEKLY CATCH DATA - 1987

WEEK	DATE	BOATS	KING	RED	COHO	PINK	CHUM	TOTAL	DAYS
25	6/20	CLOSED							
26	6/27	CLOSED							
27	7/04	CLOSED							
28	7/11	1	20	351		3		374	2.5
29	7/18	1	10	801		3		814	3.5
30	7/25	1		157		38		195	2.5
31	8/01	1	1	351		51		403	2.5
32	8/08	1	2	86	14	2	1	105	3.0
33	8/15	1		30	4	3		37	3.0
34	8/22	2		143	198	11	2	354	3.0
35	8/29	3		48	234	2	13	297	3.0
36	9/05	4		6	641		8	655	2.0
37	9/12	4		3	513		1	517	4.0
38	9/19	4			1,103		4	1,107	4.0
39	9/26	3			747		2	749	4.0
40	10/3	4			192		6	198	4.0
TOTAL:		30	33	1,976	3,646	113	37	5,805	41.0

5 YEAR COMPARISON

1982	5	10	5,102	9,955	700	13	15,780	40.0
1983	5	3	2,459	5,340	1,376	3	9,181	37.5
1984	4	22	726	10,688	1,792	71	13,299	34.5
1985	4	6	1,272	9,129	315	13	10,736	40.5
1986	4	6	498	2,495	80	3	3,082	29.0
1987	4	33	1,976	3,646	113	37	5,805	41.0

ESCAPEMENT

DATE	AREA	KING	RED	COHO	REMARKS
7/21	Tawah	2	0		Aerial
7/21	Ophir		200		Aerial
9/01	Tawah	6		236	Boat
9/22	Tawah			1,500	Aerial
9/22	Ophir			400	Aerial
10/8	Tawah			5,000	Boat, REL Bridge to Ophir

YAKUTAT BAY WEEKLY CATCH DATA - 1987

WEEK	DATE	BOATS	KING	RED	COHO	PINK	CHUM	TOTAL	DAYS
24	6/13	31	34	1,942		1	6	1,983	1.0
25	6/20	52	87	2,891	13	8	10	3,009	1.0
26	6/27	41	31	2,412	11		5	2,459	1.0
27	7/04	33	48	1,884	26	33	77	2,068	1.0
28	7/11	12	17	3,120	82	77	12	3,308	2.5
29	7/18	23	51	11,071	298	1,168	27	12,615	3.5
30	7/25	24	45	1,438	454	217	5	2,159	2.5
31	8/01	3	2	38	30	42	1	113	2.5
32	8/08	3	2	42	105	92	1	242	3.0
33	8/15	4		5	107	11	2	125	3.0
34	8/22	8	1	75	206	20	24	326	3.0
35	8/29	5		23	183		9	215	3.0
36	9/05	3		2	220	1		223	3.0
37	9/12	5			515	1	9	525	4.0
38	9/19	4			155		7	162	4.0
39	9/26	2	1		110		1	112	4.0
40	10/3	1			5			5	4.0
TOTAL:		254	319	24,943	2,520	1,671	196	29,649	46.0

5 YEAR COMPARISON

1982	26R,3coho	415	23,922	3,712	3,602	272	31,923	47.5
1983	16R,4coho	239	17,603	3,634	14,900	363	36,739	40.0
1984	32R,5coho	125	9,134	2,913	2,159	996	15,327	29.0
1985	32R,4coho	237	10,992	3,204	5,479	694	20,606	45.5
1986	36R,7coho	202	21,826	3,056	5,162	687	30,933	36.0
1987	52R,5coho	319	24,943	2,520	1,671	196	29,649	46.0

ESCAPEMENT

DATE	AREA	COHO	PINK	REMARKS
7/21	Humpy Creek		0	Aerial
8/04	Humpy Creek		650	Boat
8/10	Humpy Creek		2,000	Aerial
8/31	Humpy Creek		1,700	Foot

MANBY FISHERIES WEEKLY CATCH DATA - 1987
COMBINED CATCH

WEEK	DATE	BOATS	KING	RED	COHO	PINK	CHUM	TOTAL	DAYS
26	6/27	3		427				427	2.5
27	7/04	10	15	925	3			943	1.0
28	7/11	3		2,812				2,812	2.5
29	7/18	4		2,420				2,420	3.5
30	7/25	3		1,318				1,318	4.5
31	8/01	2		155				155	2.5
32	8/08	NOT FISHED							3.0
33	8/15	NOT FISHED							3.0
34	8/22	NOT FISHED							3.0
35	8/29	2		7	776			783	3.0
36	9/05	5		2	2,163		1	2,166	3.0
37	9/12	1			3,153			3,153	4.0
38	9/19	3		1	1,457			1,458	4.0
39	9/26	NOT FISHED							4.0
40	10/3	NOT FISHED							4.0
TOTAL:		39	15	8,067	7,552		1	15,635	47.5

5 YEAR COMPARISON

1982	22R,7coho	25	19,211	11,450	60	49	30,795	29.0
1983	20R,4coho	25	7,689	5,457	139	13	13,323	22.0
1984	18R,7coho	44	5,116	18,661	2	8	23,831	28.0
1985	14R,5coho	5	6.662	16,366	33	12	23,078	34.5
1986	3R,6coho	0	4,879	3,978	0	3	8,860	43.5
1987	10R,7coho	15	8,067	7,552	0	1	15,635	47.5

ESCAPEMENT

DATE	AREA	RED	COHO	REMARKS
8/13	Esker Creek	30		Helicopter
8/13	Sudden River	30		Helicopter
8/13	Spoon River	150		Helicopter
8/13	Manby Stream	0		Helicopter

YAHTSE RIVER WEEKLY CATCH DATA - 1987

WEEK	DATE	BOATS	RED	COHO	CHUM	TOTAL	DAYS
34	8/22	CLOSED					
35	8/29	4	3	1,106		1,109	3.0
36	9/05	CLOSED					
37	9/12	5		3,175		3,175	4.0
38	9/19	6	1	3,754	1	3,756	4.0
39	9/26	9		3,471		3,471	4.0
40	10/3	2		1,367	1	1,368	4.0
TOTAL:		26	4	12,873	2	12,879	19.0

5 YEAR COMPARISON

1982	7		9,134		9,134	18.0
1983	6		6,799		6,799	18.0
1984	5		1,526		1,526	19.0
1985	5		3,871		3,871	20.0
1986	12		18,278		18,278	16.0
1987	9	4	12,873	2	12,879	19.0

ESCAPEMENT

DATE	AREA	COHO	REMARKS
9/05	Yahtse	150	Aerial
9/05	Jetty Creek	50	Aerial
9/05	Pt. Riou Creek	50	Aerial
9/11	Yahtse	3,000	Aerial
9/11	Jetty Creek	200	Aerial
9/11	Pt. Riou Creek	0	Aerial

YAKATAGA DISTRICT WEEKLY CATCH DATA
TSIU -- KALIAKH RIVERS - 1987

WEEK-DATE		BOATS	COHO:	TSIU	KALIAKH	TOTAL	DAYS
34	8/22	1K		CLOSED	98	98	2K
35	8/29	37T,24K		12,288	5,091	17,379	2T 3K
36	9/05	36T,23K		14,040	8,332	22,372	2T 3K
37	9/12	24T, 5K		3,552	1,298	4,850	2T 4K
38	9/19	28T,10K		4,317	890	5,207	1T 4K
39	9/26	4T		1,488	NOT FISHED	1,488	4T
40	10/3			NOT FISHED	NOT FISHED		
TOTAL:		129T,63K		35,685	15,709	51,394	11T 16K

5 YEAR COMPARISON

1982	40	45,866	15,856	61,722	13
1983	16	19,687	4,433	24,120	10
1984	22	50,875	13,082	63,957	21
1985	34	64,601	22,641	87,242	20
1986	29T,27K	19,251	10,775	30,026	17T,23K
1987	37T,24K	35,685	15,709	51,394	11T,16K

ESCAPEMENT

DATE	AREA	RED	COHO	REMARKS
7/04	Tsiu	1,000		
8/23	Tsiu		500	9,000 below markers
8/24	Tsiu		500	10,000 below markers
8/26	Tsiu		5,700	8,000 below markers
8/29	Tsiu		7,500	4,000 below markers
9/01	Tsiu		8,500	
*9/21	Tsiu		2,500	High, dark water

*Between 9/01 and 9/21 four attempts were made to survey the Tsiu. Flood conditions prevented any observation of fish.

Flight on 10/20 revealed entire area under water, no counts possible

To: Leon Shaul
Fisheries Biologist II
Coho Research
Douglas

Date: December 18, 1987

From: Robert Larson
Asst. Area Mgmt. Biologist
Commercial Fisheries
Petersburg

Subject: '87 Coho Escapement Surveys

The last coho survey of 1987 was completed December 1 and the completed escapement file sent to Doug Jones the next day. Copies of all the previous years' surveys for the Petersburg management area, ranked by stream and magnitude of escapement, are attached. I've also included a list of streams for our area that may be useful as index streams with significant escapement counts (surveys conducted September, October, November of more than the intertidal area). Attached also is the memo Bob Zorich, FRED/Sportfish, Petersburg, wrote concerning his survey efforts this fall. The following are my recommendations:

STIKINE RIVER

There are six tributaries in the U.S. portion of the Stikine River that have good visibility and have broad windows to make comparable escapement surveys. Kikahe River, Clear Creek, Shuktusa Branch, Shakes Creek, Andrews Creek and North Arm Creek will be good index streams, but I don't think Goat Creek has a large enough escapement to be appropriate nor is Ketili Creek appropriate due to the greatly variable escapement counts caused by timing and poor visibility. Two escapement surveys should be conducted by helicopter two weeks apart starting the middle of October. The cost will be $1,000 per trip.

ETOLIN ISLAND

We have identified two streams on the southern shore of Etolin Island that will be ideal representatives of small non-lake rearing island type systems. They are Navy Creek and Flat Creek. Both these streams can be easily walked, are terminated by barrier falls, and have excellent visibility. I believe we can get total escapement counts at both sites with only one survey. The cost for fixed wing access was $450 with the best timing early to mid October.

BRADFIELD CANAL

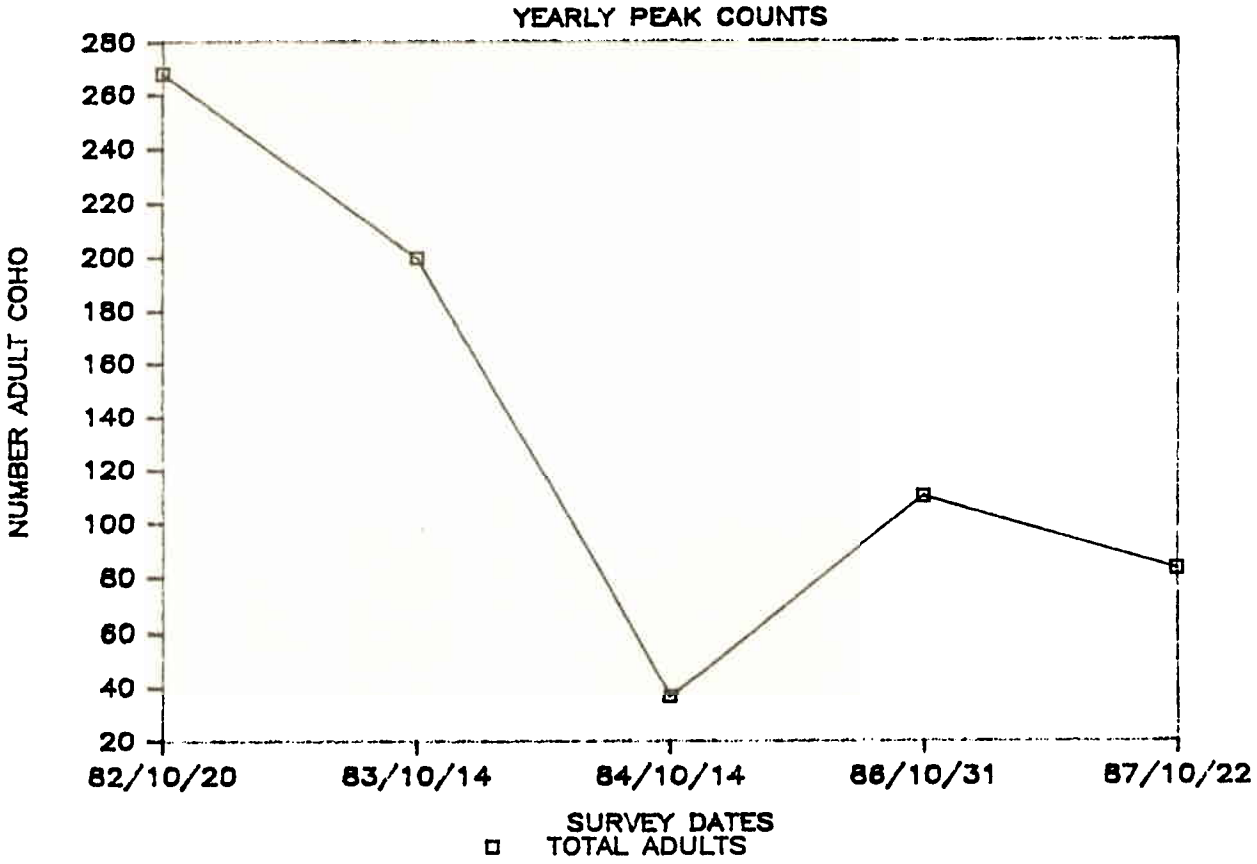
Coho school in the larger pools in the lower reaches of the large streams in this area and are difficult to see until mid November when the weather turns cold, the water level drops, and the fish are near their spawning sites. These streams also must be surveyed by helicopter, preferably twice, at a cost of approximately $1500 per trip. I would continue to survey the North Fork Bradfield, Harding, and Oerns but drop the East Fork Bradfield and substitute Eagle Creek.

KUIU AND KUPREANOF ISLANDS

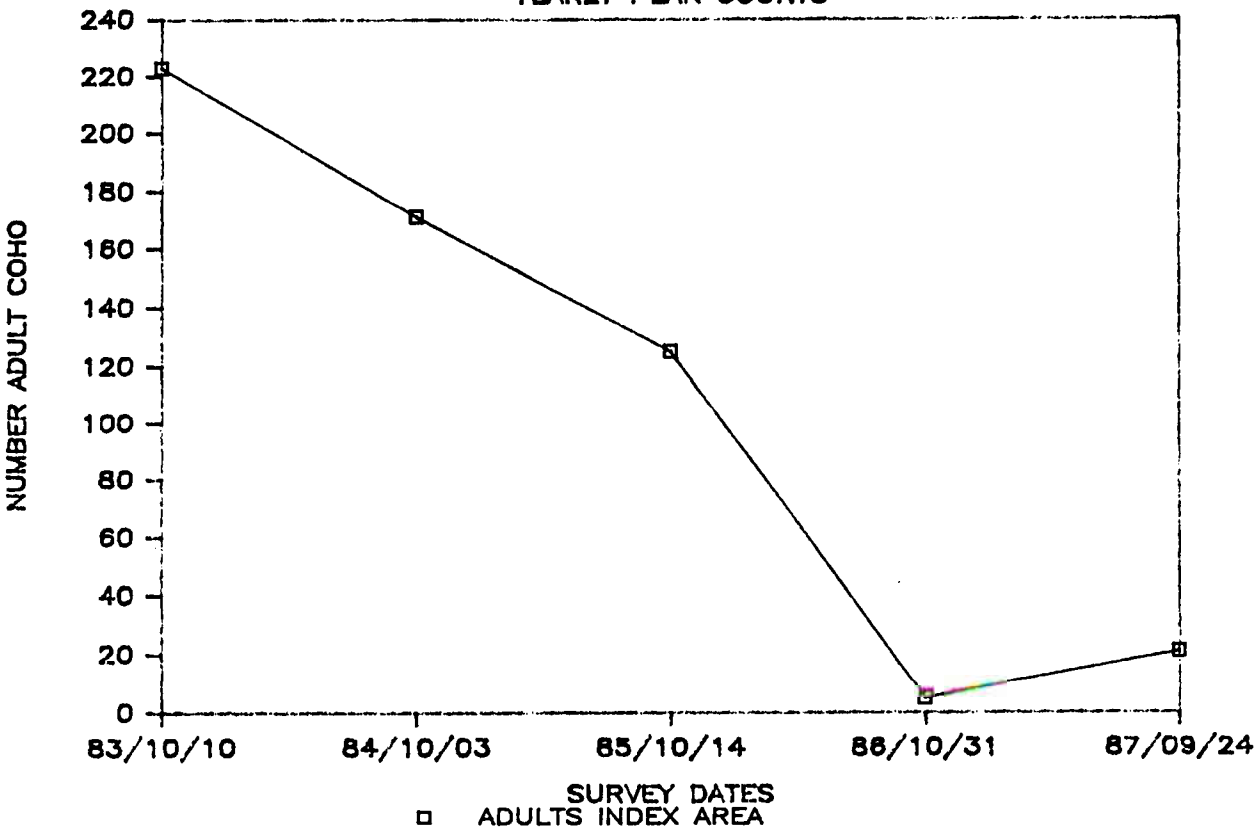
Streams in this area are generally difficult to survey because their small size necessitates walking them for accurate counts and the relatively large muskeg drainage areas keep the water levels from dropping rapidly after a rain keeping the water color dark. More work needs to be done in this area before streams that would make good index sites are discovered.

cc: Paul Larson
Steve Elliott
Bob Zorich

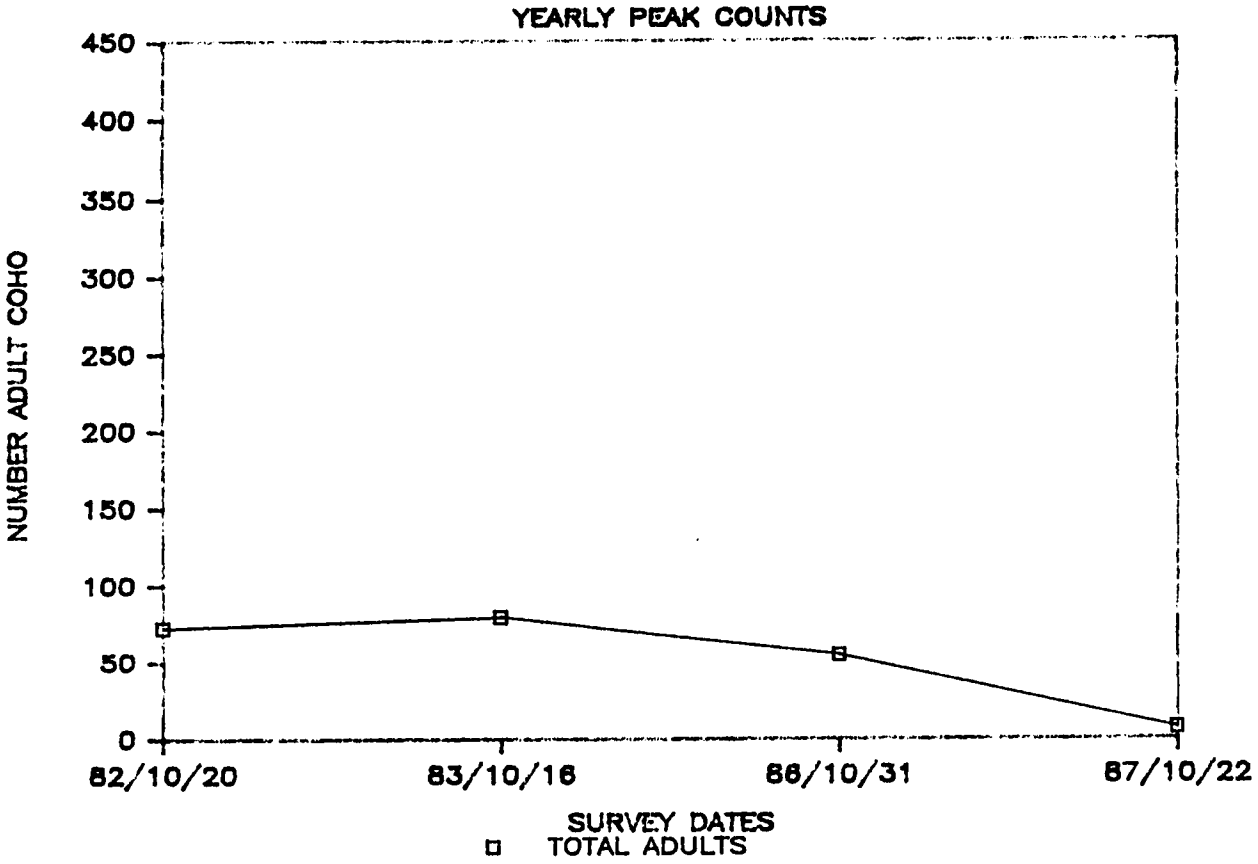
CLEAR CREEK COHO ESCAPEMENT



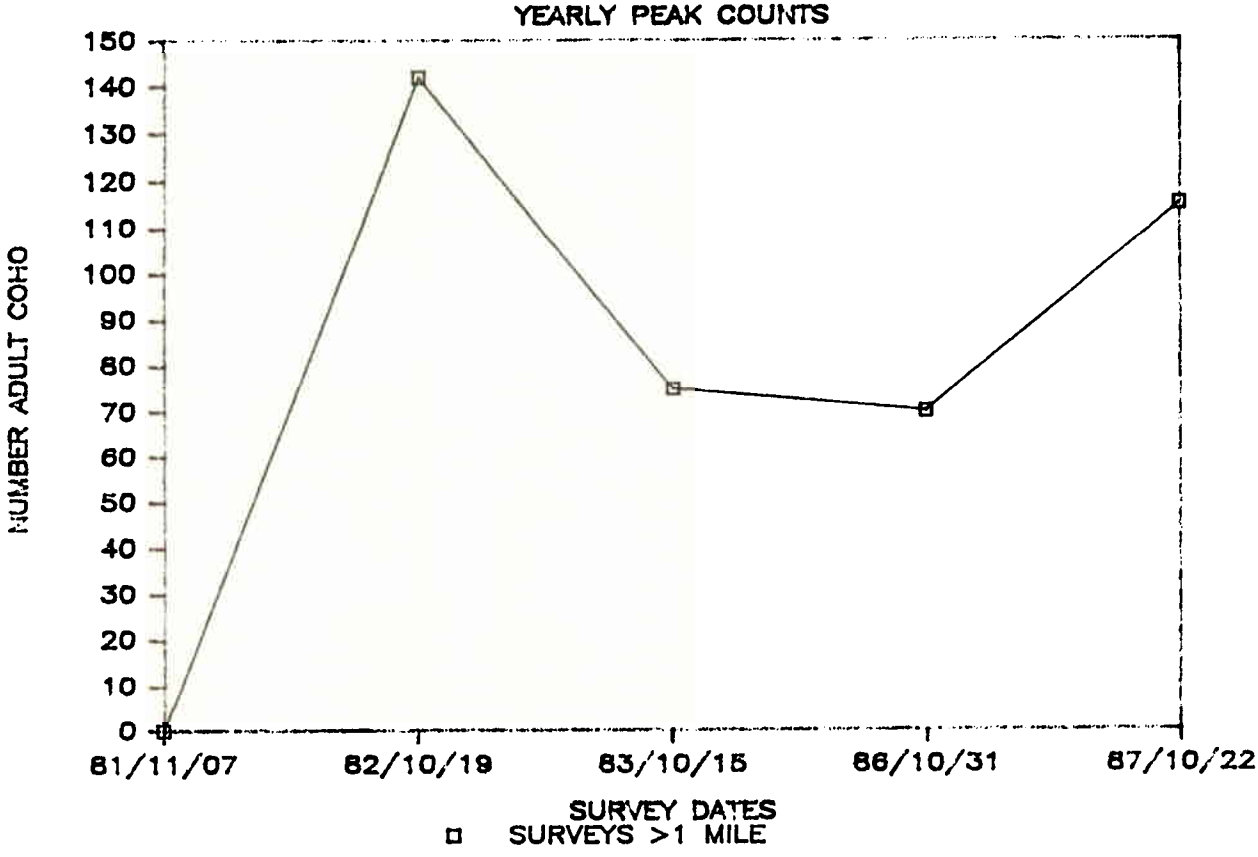
FALLS CREEK COHO ESCAPEMENT



SHAKES SLOUGH COHO ESCAPEMENT

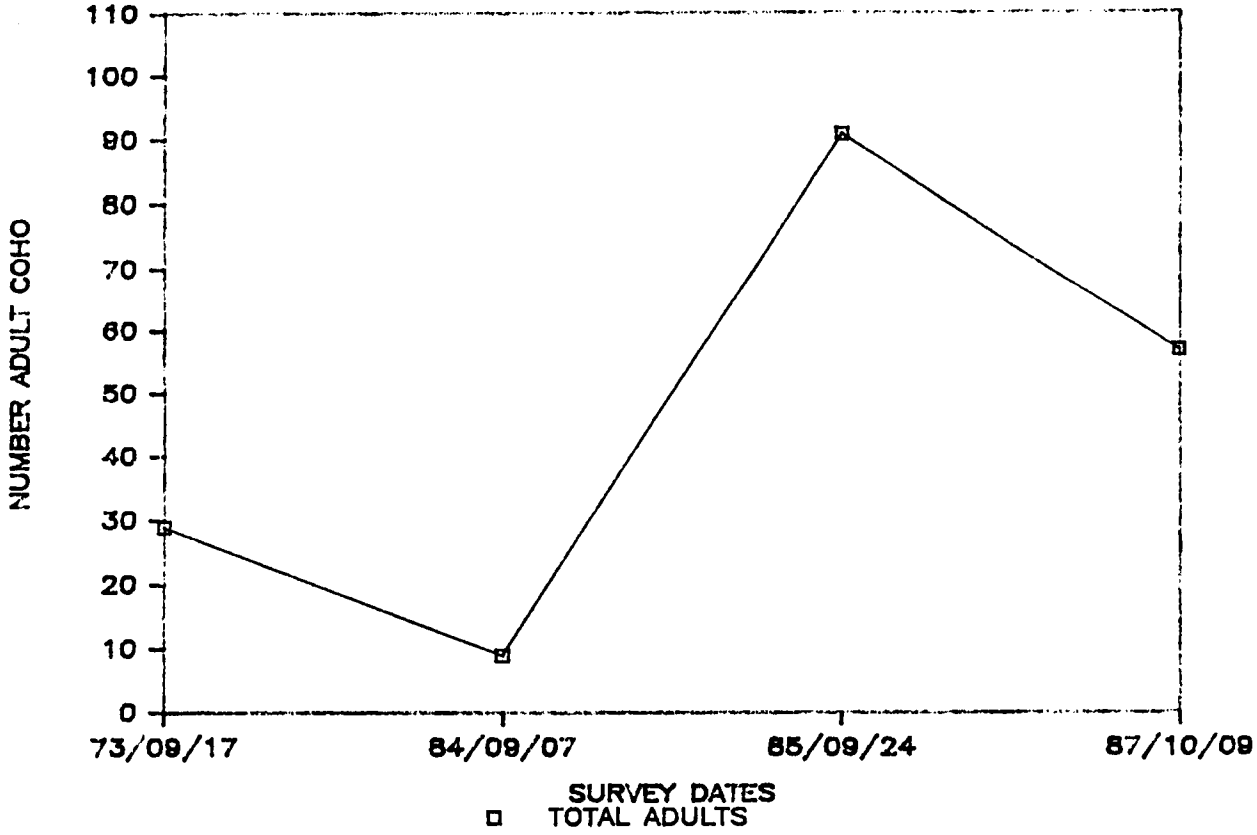


SHUKTUSA BRANCH COHO ESCAPEMENT



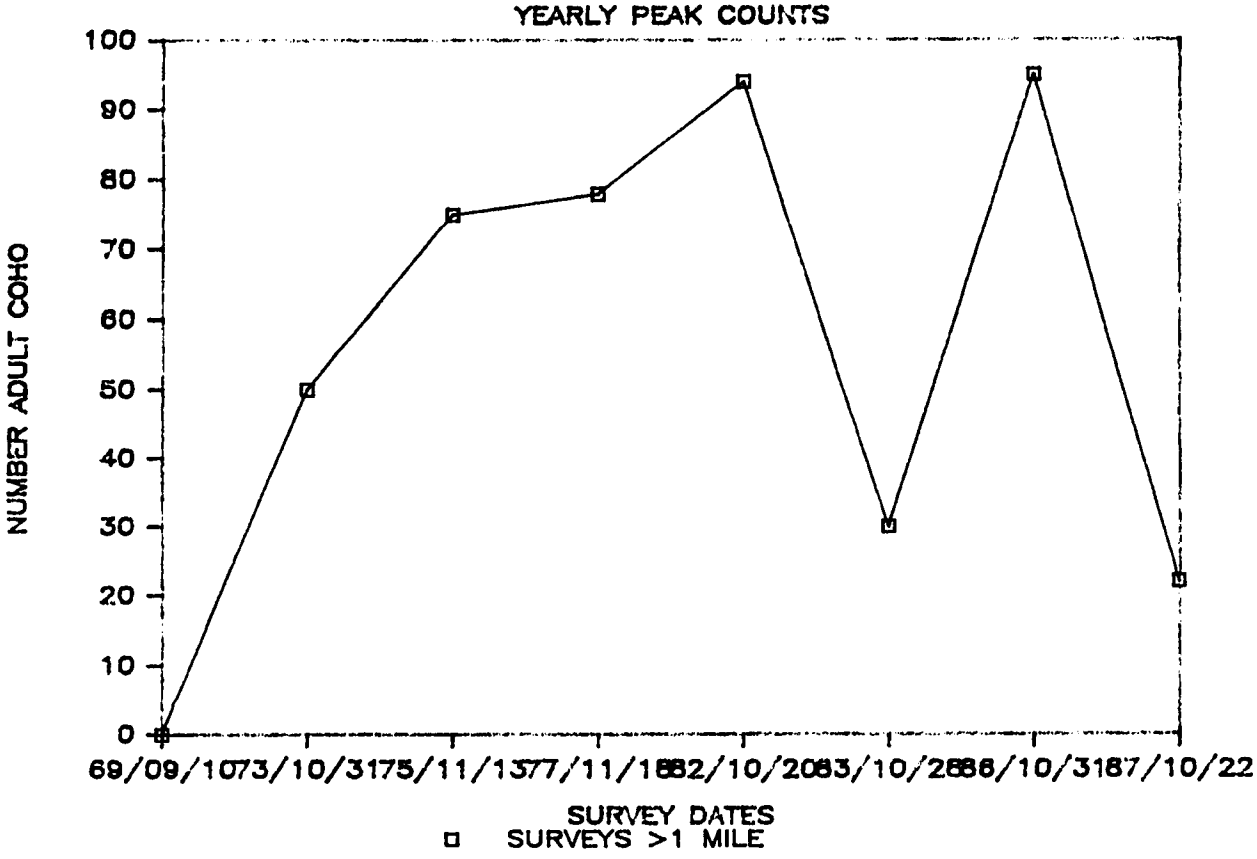
NAVY CREEK COHO ESCAPEMENT

YEARLY PEAK COUNTS



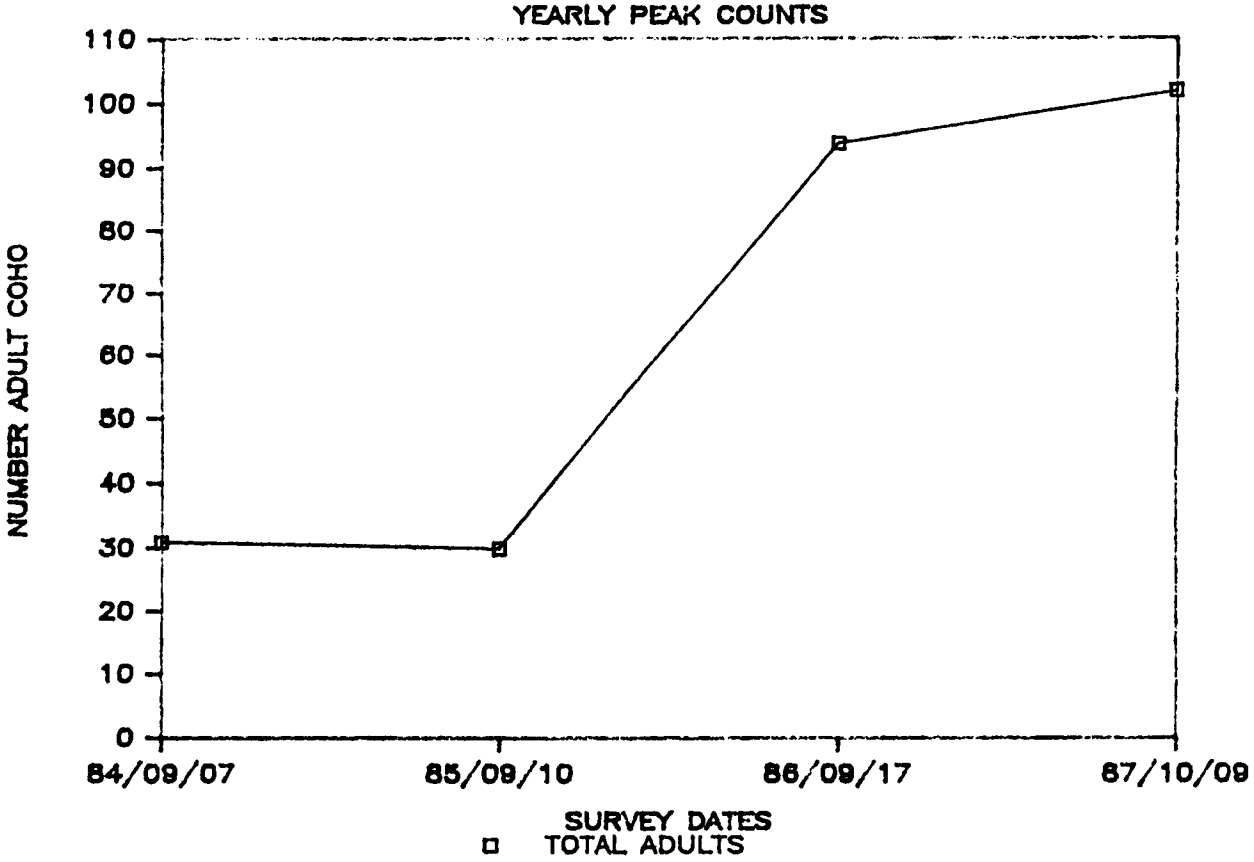
NORTH ARM CK. COHO ESCAPEMENT

YEARLY PEAK COUNTS



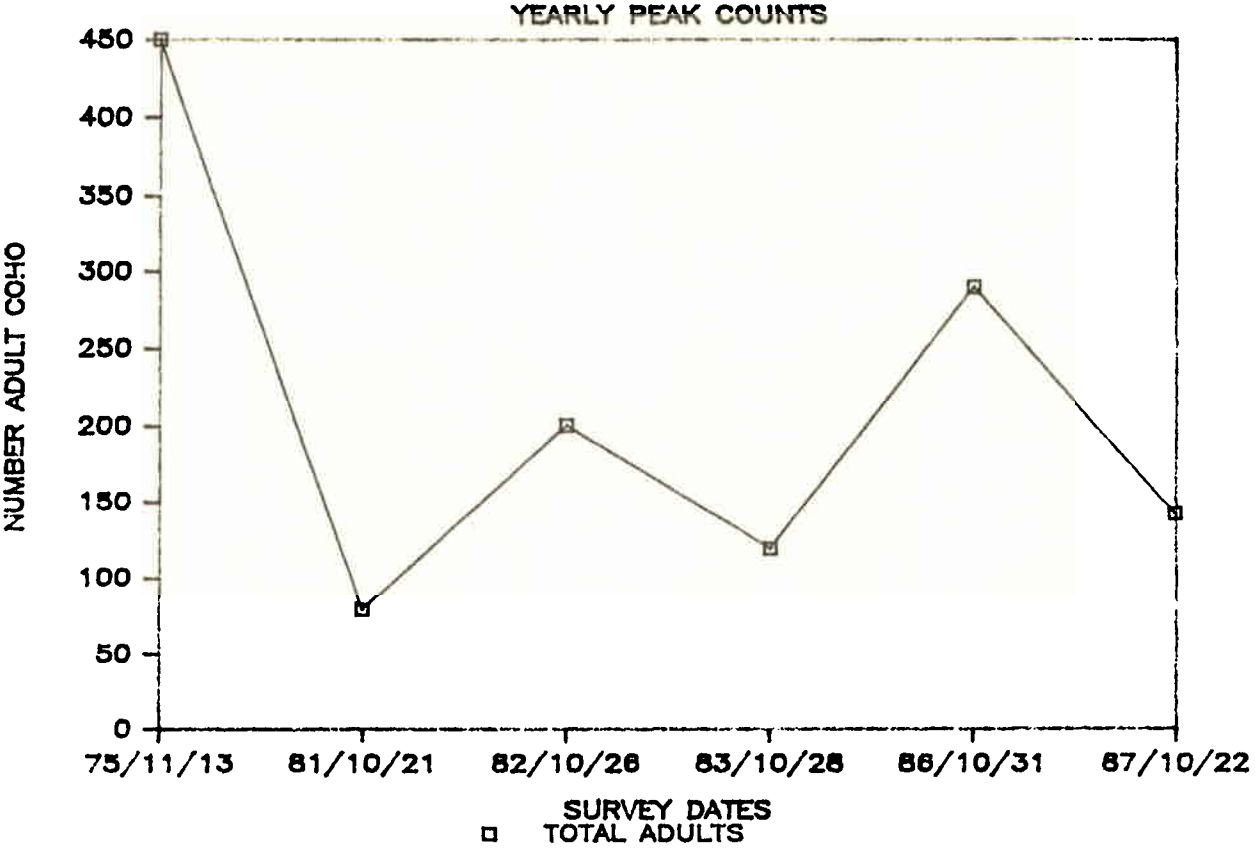
FLAT CREEK COHO ESCAPEMENT

YEARLY PEAK COUNTS

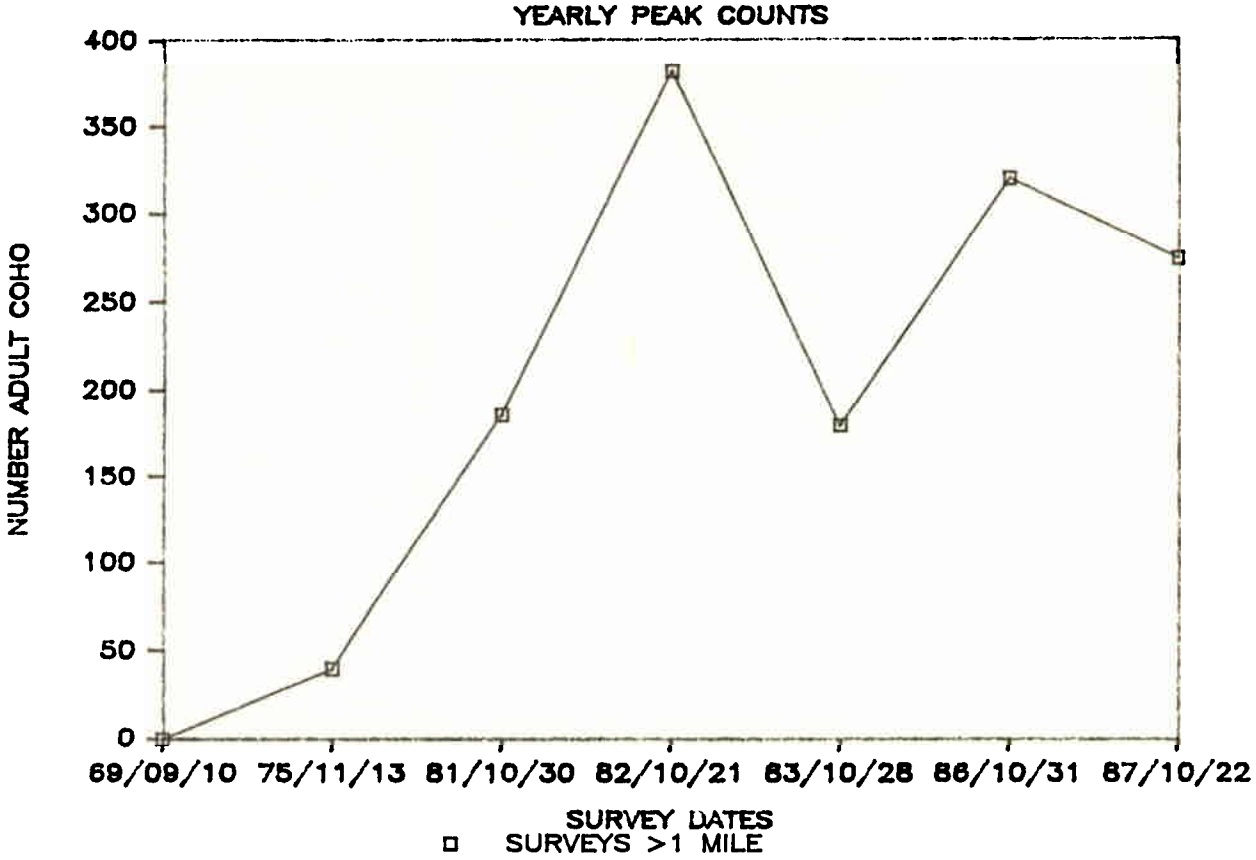


KIKAHE CREEK COHO ESCAPEMENT

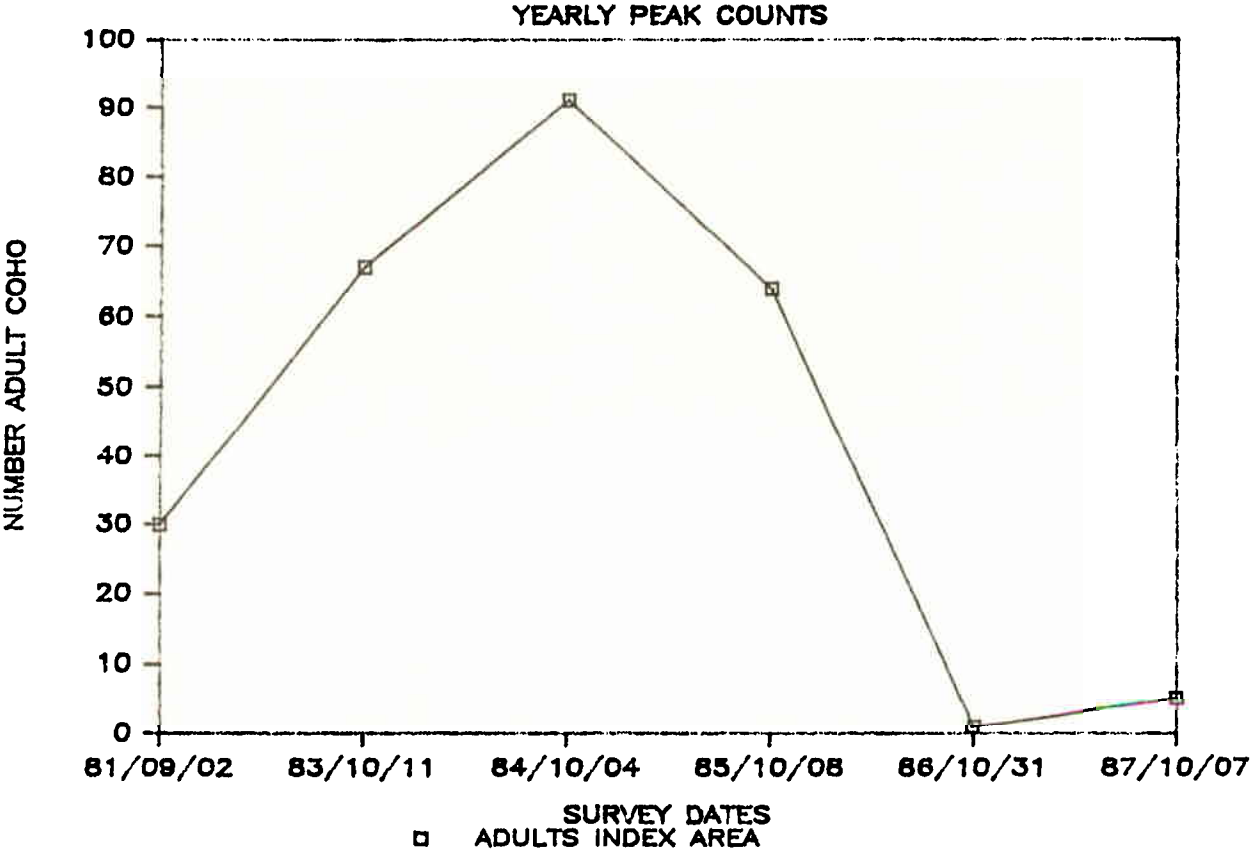
YEARLY PEAK COUNTS



ANDREWS CREEK COHO ESCAPEMENT



BEAR CREEK COHO ESCAPEMENT



ANDREWS CREEK 108-40-20

69/09/10	1.0	AERIAL	0		0	
75/09/08	1.0	AERIAL	0		0	
75/09/11	2.0	AERIAL	12		12	
75/11/13	L	AERIAL	40		40	
81/10/30	4.0	FOOT	186		186	
82/10/21	3.5	FOOT	382		382	
83/08/31	WEIR		5		5	
83/10/28	L	HELO	180		180	
84/08/24	WEIR		2		2	
86/10/31	L	HELO	320		320	
87/10/22	L	HELO	275		275	
87/11/07	L	HELO	205		205	
87/12/01	L	HELO	20		20	

BEAR CREEK 108-50-03

81/09/02	L	FOOT	30		30	
83/10/11	1.5	FOOT	63	4	67	INDEX AREA
84/10/04	1.5	FOOT	91		91	INDEX AREA
85/10/08	1.7	FOOT	64		64	INDEX AREA
86/10/31	3.5	FOOT	1		1	TO UP BRDG
87/09/22	1.5	FOOT	1		1	INDEX AREA
87/10/07	2.5	FOOT UPPER AREA=21			5	IN INDEX AREA

87/11/07	L	HELO	39		39	
87/12/01	L	HELO	30		30	

KETILI-BARNES 108-40-14

75/09/11	L	AERIAL	0		0	
80/10/24	WEIR		567		567	PARTIAL CT
81/10/28	L	FOOT	346		346	
81/11/03	WEIR		124		124	PARTIAL CT
82/10/22	.5	FOOT	2		2	
82/10/26	1.0	FOOT	7	3	10	
86/10/31	L	HELO	305	95	400	ICE
87/10/22	L	HELO	45		45	
87/11/07	L	HELO	690		690	
87/12/01	L	HELO	85	10	95	

KIKAHE 108-40-16

75/09/10	.2	AERIAL	0		0	
75/11/13	L	AERIAL	450		450	
76/11/08	2.0	AERIAL	50		50	
77/11/18	2.0	AERIAL	0		0	FROZEN
81/10/21	L	AERIAL	80		80	
81/11/07	L	HELO	0		0	
82/10/26	L	HELO	201		201	
83/10/28	L	HELO	120		120	
86/10/31	L	HELO	290		290	EXC VIS
87/10/22	L	HELO	142		142	EXC VIS
87/11/07	L	HELO	129		129	
87/12/01	L	HELO	17		17	

GOAT CREEK 108-40-17

75/09/10	1.0	AERIAL	0		0	
80/11/11	L	FOOT	0		0	
82/10/19	.7	FOOT	0		0	
84/10/18	L	FOOT	24		24	
86/09/10	L	FOOT	0		0	
86/10/31	L	HELO	2		2	
87/10/22	L	HELO	1		1	

SHUKTUSA BRANCH 108-40-18

81/11/07	L	HELO	0		0	
82/09/13	2.0	FOOT	55		55	
82/10/19	2.0	FOOT	135	7	142	
83/09/13	1.2	FOOT	35		35	
83/10/15	L	FOOT	75		75	
84/10/18	.5	FOOT	0		0	
86/09/10	.5	FOOT	0		0	
86/10/31	L	HELO	60	10	70	
87/10/22	L	HELO	115		115	
87/11/07	L	HELO	4		4	
87/12/01	L	HELO	0		0	

82/10/16	L	AERIAL	25		25	
87/10/08	L	HELO	0		0	
87/11/18	L	HELO	270	0	270	

BRADFIELD EAST FORK 107-40-53

71/10/15	L	AERIAL	0		0	
75/10/27	13.0	AERIAL	3700		3700	
76/10/14	3.0	AERIAL	0		0	
76/11/08	5.0	AERIAL	100		100	
77/11/07	10.5	FOOT	1500		1500	SPAWNING
78/11/13	L	AERIAL	170		170	
81/10/22	6.5	AERIAL	0		0	
81/11/07	L	HELO	0		0	
82/10/16	L	AERIAL	15		15	
87/10/08	L	HELO	0		0	
87/11/18	9.0	HELO	160		160	

NORTH ARM 108-40-10

69/09/10	1.0	AERIAL	0		0	
73/10/31	1.0	AERIAL	50		50	
75/09/08	1.0	AERIAL	0		0	
75/09/11	.5	AERIAL	30		30	
75/11/13	L	AERIAL	75		75	
77/11/18	1.0	AERIAL	75	3	78	
80/11/10	.7	FOOT	12	1	13	
82/10/20	2.0	FOOT	94		94	
83/10/28	L	HELO	30		30	
86/09/10	L	FOOT	4		4	
86/10/31	L	HELO	95		95	
87/10/22	L	HELO	22		22	
87/11/07	L	HELO	23		23	
87/12/01	L	HELO	0		0	

SHAKES SLOUGH 108-40-13

75/09/11	.2	AERIAL	0		0	
82/10/20	.7	FOOT	72	1	73	
83/10/16	L	FOOT	80		80	
86/09/10	L	FOOT	0		0	
86/10/31	L	HELO	55		55	
87/10/22	L	HELO	7		7	
87/11/07	L	HELO	6		6	
87/12/01	L	HELO	0		0	

CLEAR CREEK 108-40-13A

76/11/08	1.0	AERIAL	2		2	
82/10/20	1.5	FOOT	268		268	
83/10/14	L	FOOT	200		200	
84/10/18	1.3	FOOT	37		37	
86/10/31	L	HELO	110		110	
87/10/22	L	HELO	83		83	

HISTORICAL COHO ESCAPEMENTS
PETERSBURG/WRANGELL AREA INDEX STREAMS

KAKE BAKE CREEK 105-32-20

DATE		ITZ	UPSTREAM	DEAD	TOTAL
84/10/11	L	FOOT	36	9	45 +24 OUT CK.
85/09/30	M	FOOT 17			17 SAMP SEINE
86/10/15	L	FOOT	50		50 10 ABV ROAD

FLAT CREEK 106-22-06

84/09/07	2.0	FOOT 3	28		31
85/09/10	L	FOOT	30		30
86/09/17	L	FOOT 12	81	1	94
87/10/09	L	FOOT	102		102

NAVY CREEK 106-22-16

73/09/17	.3	FOOT 20	9		29
84/09/07	L	FOOT	9		9
85/09/24	L	FOOT	84	7	91
86/09/17	L	AERIAL			0
87/10/09	L	FOOT	57		57

FALLS CREEK 106-44-06

75/10/03	WEIR		74		74
83/10/10	3.5	FOOT	219	4	223
84/10/03	4.0	FOOT	171		171
85/10/14	2.5	FOOT	125		125
86/10/31	4.0	FOOT	1	4	5
87/09/24	5.0	FOOT	21		21
87/10/30	5.0	FOOT	4	1	5

HARDING RIVER 107-40-49

80/09/09	5.0	FOOT	10		10
82/10/16	L	AERIAL	50		50
85/09/07	L	FOOT	214	4	218
86/08/20	4.0	BOAT	50		50
87/10/08	L	HELO	0		0 NO SEE POOLS
87/11/18	L	HELO	70		70

BRADFIELD NORTH FORK 107-40-52

71/10/15	L	AERIAL	3500		3500
73/09/12	1.0	AERIAL	0		0
75/10/27	14.0	AERIAL	800		800
76/10/14	4.0	AERIAL	0		0
76/11/08	7.0	AERIAL	2		2
78/11/13	L	AERIAL	120		120
81/10/22	10.5	AERIAL	0		0
81/11/07	L	HELO	258		258

gusty strong wind kept the visibility from being good. We could see that the upper pools that held the fish during the last survey were empty. No bears or eagles observed.

108-40-20 Andrews Creek 20 live 0 dead

Excellent visibility with low water. The fish we saw were in the same area as previous surveys. They had large patches of white on their backs and appeared smaller and more slender than those observed on November 7.

108-40-18 Shuktusa Branch 0 live 0 dead

Some of the smaller beaver ponds adjacent to the creek frozen. Good visibility in the main pools and stream. No sign of fish.

108-40-16 Kikahe 17 live 0 dead

Fish distributed in the central portion of the stream. Very ragged looking with no bears and only 1 eagle in the area. Excellent visibility and low water. Approximately 6" of snow here while there is none at the river's mouth.

108-40-14 Ketili (Barnes Lake) 85 live 10 dead

Water level normal, visibility normal. Fish in pairs on riffles, old and ragged. Dead fish are bear or eagle kills. Open area of lake held 45 swans and 200 geese. No signs of fresh fish in lake or slough.

108-40-13a Clear Creek 30 live 0 dead

Excellent visibility throughout the stream. The fish were located in a side slough and two pools near the logjam. Fish very ragged looking.

108-40-13 Shakes Creek 0 live 0 dead

Similar survey conditions as survey on November 7 but no fish or signs of fish observed.

107-40-09 Glacier Creek 0 live 0 dead

No coho or sockeye observed. Upstream portion below falls good spawning but availability suspect due to 1/2 mile of rapids at the creek mouth. Poor visibility due to stream cover and poor light.

107-40-25 Oerns Creek 15 live 1 dead

Only fair visibility due to falling light despite low clear water level. Surveyed at 1:30 p.m. which is too late in the afternoon this time of year. Searched from the pool at the junction with Aarons Creek upstream to the falls. All the fish observed were in the upper riffles and pools below the rapids.

107-40-49 Harding River 70 live 0 dead

The high ridge on the southwest side of the steam prevents bright light from making the pools more visible. Poor visibility in the lower section and normal visibility in the upper section below the rapids. With this low water level the falls/rapids area looks very passable. The area above the falls and lake was surveyed for 4 or 5 miles and no fish observed despite excellent visibility in this section. The stream was open, lots of snow and very clear water with light colored gravel substrate.

107-40-51 North Fork Bradfield 270 live 2 dead

Surveyed from the mouth to the major forks. Water was low and clear with clear skies and 6 inches of snow. Visibility was excellent on the riffles and shallow pools but the larger pools (mostly in the lower river) were too deep to see into. Fish were distributed from 3.5 miles above the mouth to 6 miles above. I don't think most of the pools in the downstream section held any fish because of the visibility and where I saw fish was associated with good spawning areas. The three largest schools of fish were near the mouth of the three tributaries in this section. The only fish I observed in the side channels or tribs were 60 in the tributary at mile 6.

107-40-53 East Fork Bradfield 160 live 0 dead

Surveyed 9 miles of stream. Terminated survey due to lack of habitat (rapids), dense fog, and no fish. The observed fish were distributed between a point 2 miles above the mouth to the bedrock canyon at mile 5. Few good spawning tributaries in this section. One seal at mile 3; little bear, wolf or eagle sign. All the fish observed were in shallow pools associated with riffles, and I don't think the deeper pools with poor visibility in the lower stream held many fish.

STIKINE RIVER TRIBUARIES
HELICOPTER SURVEY DECEMBER 1, 1987
ROBERT LARSON AND BRIAN LYNCH
COST: $1,021.50

108-40-10 North Arm Creek 0 live 0 dead

Started the survey at the upper falls. Water clear but not low, although

108-40-18 Shuktusa 4 live 0 dead

Surveyed upstream then searched slower downstream. Total length. Four fish observed under log in highest pool below riffles. None observed at mouth or in beaverponds. Good visibility, clear, low water.

108-40-16 Kikahe 129 live 0 dead

Surveyed from the forks downstream, the same area as Will's survey, and the area I did last fall. Snowing lightly with heavy overcast, visibility good due to slow helicopter and low clear water and good snow cover. One small brown bear and three moose observed. Fish distributed throughout stream in pools. No room under banks. Three fish on shallow riffles.

108-40-14 Ketili 690 live 0 dead

No fish or signs of fish in the lake or beaver pond sloughs at the stream mouth. Fish distributed from the uppermost pool to the junction of the three forks upstream. Visibility fair with much of stream cloudy (from fish activity?) and many of the fish crowded under banks and logs. Looked fairly impressive for so small a stream.

108-40-13A Clear 39 live 0 dead

Surveyed both directions. Good visibility. Fish from just below logjam to just below plunge pool at falls. Nothing below falls or at mouth. No undercut banks.

108-40-13 Shakes 6 live 0 dead

Observed 3 fish on upstream flight under pool midway between mouth and falls. Looked more closely at pool on return trip. 6 adults, good visibility.

108-40-10 North Arm 23 live 0 dead

Poor visibility due to light snow and failing light. Fish distributed in upper half of stream with 15 present in the large pools one-quarter mile downstream from the terminal falls.

BRADFIELD CANAL NOVEMBER 18,1987
HELICOPTER SURVEY FROM PETERSBURG
COST: $1844 FOR 3.4 HRS. BY ROBERT LARSON

107-40-08 Porterfield Ck. 0 live 0 dead

No coho or sockeye observed. Stream open, water clear and low. Good visibility despite poor light. Good spawning riffles throughout stream to just below the barrier falls.

108-40-10 North Arm Creek: 22 coho

The water was very clear but the extensive number of logs, stumps, and bushes prevented getting a really good view. This stream should be walked on the same day it is flown to see if it should be crossed off the helicopter survey list.

1987 COHO ESCAPEMENTS Bergmann & Minicucci
Keku Strait
Heavy Creek (109-42-40) Just north of Gil Harbor 11/4/87
COST: $45.00 Seat fare with Alaska Island Air; Kake to Petersburg
(named for the logger/pilot who had a camp near here and crashed into trees just short of the water and died)

This stream is mostly bedrock with very little gravel in the first three-quarters of a mile. It would be fairly easy to walk with felt-soled boots. It is a dark, muskeg drainage and should only be walked after at least three days with no rain. The stream was at about normal flow, but water had been very high within the past few days. About 300 yards upstream on the righthand side in the high flow channel of the creek is a small spring. It has a slightly sulphur smell, and I would guess it is flowing at about 1/10 cfs. It was noticeably warmer than the stream, probably between 50 and 60 degrees farenheit. There were no fry in the area. There was also one more spring about one mile upstream on the right side but it was just a trickle. About 3/4 of a mile upstream there was a sheer, 5-foot falls that was a barrier to pink salmon. About 40 pink jawbones and a chum jawbone were observed below the barrier but none were above the barrier. About 1 mile upstream there is the first major fork. It enters from the left side and is steep. A hundred yards or so above that is a large beaver dam on the right side of the stream. In the first large pool above the beaver dam a fish was observed, and it was probably a coho. We walked for another couple of hundred yards and then turned around due to time constraints. The further up the stream we got, the shallower the gradient became and more spawning and rearing habitat occured. We walked down the creek to the beaver dam and then walked through the woods on the south side of the stream to the beach. It is easier walking, mostly game trails and a few small muskegs, than the stream. We walked upstream for 1 hour and fifteen minutes and it took 40 minutes to get back to the beach. There was a doe and a buck on the beach when we came in, and we spotted another deer while walking out. About a hundred mallards were at the mouth and in the bay. Crab gear at the mouth had ADF&G #38613 on the buoys.

COHO ESCAPEMENT SURVEYS- STIKINE RIVER TRIBUTARIES
Helicopter Survey by Robert Larson
November 7, 1987 COST: $1030.75 Temsco

108-40-20 Andrews Creek 205 live 0 dead

Surveyed downstream from the rapids below the uppermost patch of trees (same location as Will). Weather high overcast, two inches of snow on the ground, and good light. Water clear and low. Fish red with some showing white spots on tail. Only one pair on riffles, the rest scattered in smaller pools throughout the stream though fewer near the top and bottom. The largest, deepest pool contained no fish. Good survey.

108-40-14 Ketili Creek: 45 coho

All the fish were in the slough area just above the beaver dams. When the helicopter spooked them, they churned up a considerable amount of mud and made the visibility zero. No fish activity was observed in the tiny lake on the west side of the stream. A couple of eagles were present, and Barnes Lake had 8 swans and lots of ducks and geese.

108-40-16 Kikahe River: 142 coho, 25 trout

The survey was made about a mile and a half past the main fork, about 4 miles upstream on the topo map. The survey should probably be ended at the forks since it is mostly rapids above there. The survey was flown downstream with the sun at our backs. The first fish were observed about a half mile below those forks, and the last fish was seen about a mile above Red Slough. Visibility was excellent, and about 60 fish were in one school. This stream could be surveyed with a plane if the timing coincided with the fish being pooled up.

108-40-17 Goat Creek: 1 coho

Visibility was poor with partly glacial water. The one coho that was observed was about a half mile upstream.

108-40-13A Clear Creek: 83 coho (large str W of hot spring

Visiblity was excellent even in the deep pools. None of the fish were observed above the first fall which appears to be the upper limits of king salmon migration. However, from earlier surveys I have done on the grounds, the falls does not appear to be a barrier to good jumpers like coho. The survey was terminated about three quarters of a mile above the first falls. This stream could also be done from a plane with little loss in accuracy if timing was perfect.

108-40-18 Shuktusa Branch 115 coho

Visibility was excellent in the area above the rapids and poor below. All the fish observed were in two schools in the beaver ponds just above the rapids.

108-40-13 Shakes Creek 7 coho (sm cr that flows SE into Shakes Slough)

Water was clear but visibility was poor due to all the bushes. These fish were all seen in one small pool.

108-40-20 Andrews Creek: 275 coho

Visibility wqas excellent. The fish were mostly schooled in 4 large schools in the middle of the south fork. Fifteen coho were seen in the new main channel which cuts over to the other fork above the old weir site. No fish were observed in the south fork below that channel cutoff. This is another system that could be flown with a plane if conditions were right.

107-40-49 Harding River: 0 fish
107-40-51 North Fork of The Bradfield River: 0 fish
107-40-53 East Fork of the Bradfield River: 0 fish

The Harding River and both Forks of the Bradfield River were still partially glacial and visibility was poor in all the pools. If fish had been present in significant numbers, I am sure I would have seen them since the helicopter spooks salmon so much. The surveys on the Harding and the North Fork were flown to the barriers and on the East Fork the survey was flown about 1 mile above what appears to be a barrier.

10/9/87 57 ADULTS NAVY CREEK 106-22-16

One of the best streams found thus far for use as a coho index. Three days after heavy rain the stream is clear, normal water level, and good visibility. Very good survey; fish red but still holding in pools. No fish at mouth or below ladder. Ladder in good condition. The first school 100 yards above the USGS stream gauge = 14 adults. Twenty-two adults located in three small pools midway between mouth and falls. The upper two pools at the logjam below the falls held 9 and 12 adults. No fish were present in the plunge pool below the falls. Above the first 25' barrier falls is another of equal size with no sign of fry or adults either above or below it. An old trail built by the CCC parallels the stream and facilitates the walk back to the mouth.

Start: 9:45 a.m. End 1:15 p.m. Total time = 3.5 hrs.
Robert Larson & Rexanne Elde

10/9/87 102 ADULTS FLAT CREEK 106-22-06

Walked tidewater to barrier falls on mainstem. Observed all the fish in this stream. Easy to walk, excellent visibility. Clear and sunny. A small tributary enters from the north through a logging unit, good spawning and rearing area but too small to hold adults. Numerous wolf tracks on both banks. Walk up from low tide to falls = 1.5 hrs, down = 1 hr. High tide makes pickup by fixed wing difficult. Recommend surveying at mid to low tide. An excellent stream for coho escapement indexing.
3 live chum, 1 live pink.
Bob Zorich

1987 COHO ESCAPEMENTS 10/22/87 WILLIAM BERGMANN
$976 (1.8 Hours)

An aerial survey of the U.S. portion of the Stikine drainages was done on October 22. The helicopter departed Petersburg at 11:30 and returned at 1:30. The helicopter was flown directly to the border, and surveys were done downriver as index streams were encountered. It was a sunny, calm day with excellent visibility in those streams that were clear and did not have a lot of brush over the streams. The leaves had been falling, but there were still enough on the bushes and trees to impair visibility in the smaller streams. This was the second clear day and although it was cool out, it was not freezing. All of the fish observed were in pools. The following list is in survey order.

COHO ESCAPEMENT SURVEYS 1987

DATE	NUMBER	COMMENTS

Oct. 8 12 ADULTS PORTAGE BAY 110-16-02
COST: PART OF WILL'S BRADFILD CANAL TRIP

Very hard rain previous two weeks. Water level at falls approx. 8 feet higher than present level. Falls with 25' drop - 15'vertical; observed no fry above barrier falls. Two deep pools below falls. The plunge pool too turbulent to hold fish, the adjoining pool deep (30 yds. wide by 45 yds. long). No fish observed in this pool but is capable of hiding total escapement. Dropped off by helicopter in muskeg west of falls where there is a brushed trail that leads from a logging landing to the falls, a five minute walk from the muskeg. Distribution = 3 at first pool below large pool, 1 at small pool at rock bluff, 2 in pool opposite north fork, 4 adults and 4 jacks 20 yds. below north fork, 2 fish 150 yds. below fork in stump formed pool. Upper half of stream 70% bedrock ridges with coarse gravel, much dark moss, shallow pools and little spawning. The lower half of stream 80% shale-type gravel, little moss. Yellow, stained gravel. Large dollies in most pools. Creek okay to walk but would be better with a little less water and maybe later in the year to make sure there weren't fish holding in the upper pool.

Start 9:59 a.m. End 12:00 p.m. Total time = 2 hrs. 10 min.
Robert Larson

1987 COHO ESCAPEMENTS 10/08/87 WILLIAM BERGMANN
$1,736 including flights to Portage Bay & Duncan

An aerial survey of some of the Bradfield Canal drainages was done on October 8. The helicopter departed Petersburg at 10:00 and returned at 12:30. It was refueled in Wrangell both going and returning. It was a sunny, calm day with normal to poor visibility in the streams because of shadows, silty water, and overstory in the smaller streams. This was the third day with no rain after extremely heavy rains. Ideally we would have waited another day or two, but the forecast called for more rain. The only fish observed were in Oerns Creek in one school. Because of the distance of the surveys, it was very frustrating to fly so far and not be able to survey more; i.e., Eagle, Anan or the Craig and Jekill. The following list is in survey order.

107-40-25 Oerns Creek: 80 coho

This stream was surveyed at 10:30 on the way south, but it had a lot of shadows and we were flying into the sun. It was resurveyed at noon on the way north with much better visibility, and 80 coho were observed in one school about 1 mile upstream.

107-40-38 Marten Creek: 0 fish

This stream was entirely in the shadows and the visibility was very poor.

To: Steve Elliot
Coho Research Biologist
Sport Fish Division
Douglas

Date: November 20, 1987

File: COHOSU87

Phone: 772-3803

From: Bob Zorich B3
Area Biologist
FRED/SF Divisions
Petersburg

Subject: Coho Salmon Surveys
Petersburg Area 1987

The following is a summary of the coho salmon surveys I conducted for Sport Fish Division in the Petersburg area in 1987. Also attached are maps showing the portion of stream surveyed.

Stream Name	ADF&G #	Date	# Coho	
Falls Creek	106-44-006	9/24/87	21 live	0 dead
		10/30/87	4 live	1 dead
Bear Creek	108-50-003	9/22/87	1 live	0 dead
		10/07/87	26 live	0 dead
Sumner Creek	108-40-040	9/23/87	48 live	0 dead
		10/22/87	12 live	0 dead
Ohmer Creek	108-40-050	9/23/87	49 live	0 dead
		10/22/87	2 live	1 dead
Petersburg Creek	106-44-060	10/08/87	21 live	0 dead
Flat Creek *	106-22-006	10/09/87	102 live	0 dead

* No map attached. I walked mainstream from tidewater to barrier falls.

Comments by Stream:

Falls Creek: the surveys were conducted from the upper bridge to the lower bridge to provide continuity to historical counts. This section of stream is extremely difficult to survey coho in because of the numerous, large and dark colored pools. Falls Creek is heavily stained from muskeg run off. I had wanted to survey an upper section of the stream (the first two miles above the upper bridge), but it takes at least three days of no rain for Falls Creek to drop low enough to survey. By that time it would start raining again. I would recommend that the traditional area of Falls Creek be dropped from the survey schedule and start conducting index counts above the upper bridge.

Bear Creek: This is another stream that is difficult to get a count on. Bear Creek is long and stained with muskeg colored water. The coho tend to concentrate in the pools making a count near impossible. Don Cornelius from Habitat assisted me on both surveys and on October 7, Don walked the traditional survey, while I walked an upper section. Don saw 5 coho compared to my 21 fish. I had wanted to walk the upper section a second time, but could not fit it in. Bear Creek is another stream that needs three days of no rain prior to surveying and I question the value

of the counts.

Sumner Creek: Sumner Creek has a large drainage but a major barrier exists on the mainstem approximately one mile above tide water. It takes three days after a rain befor the stream is low enough to walk, but the water is much clearer than most streams on the island. The left fork intercepts the mainstem about 1/4 mile below the barrier. The left fork is a highly braided unstable stream that forks again about 1/4 mile up. Most of the coho were in mainstem pools associated with large woody debri. This can be a good index stream. I recommend the survey area include the upper intertidal area (1/4 mile below the road bridge) to where the left fork enters the mainstem. Peak counts will probably be make from the last week in September through the first week in October. Survey at mid to low tide stage. The mainstem from the confluence of the left fork to the falls has very little holding or spawning habitat and is not worth surveying.

Ohmer Creek: Because Ohmer Creek has two long forks it is impractical to survey the entire system. A good index count can be made mainly in the mid to upper intertidal area, from one mile below the Ohmer Creek Campground, to one mile up each fork. Survey at the mid to low tide stage. This is basically the traditional survey area. Trail and road systems provide good access to these areas. Peaks counts will probably occur the last of September to early October. Ohmer Creek and Sumner Creek should be walked the same day.

Petersburg Creek: It is my understanding that Petersburg Creek is no longer a coho salmon index stream. I concur with this decision.

Flat Creek: This is by far the best coho salmon index stream that I walked. The stream is easy to walk and the fish are highly visible. It is conceivable to get a total escapement count on this stream. There is a total barrier just over one mile upstream. Though most of the fish are holding in areas 1/2 mile to 1 mile up in the stream, I would recommend accessing the stream at low tide for fixed wing drop-off and pick-up. A high tide can flood the lower half mile of stream forcing you to fight the brush. Early to mid October looks to be optimum survey time. This stream can be surveyed in three hours or less.

In addition to the coho salmon stream surveys , Crystal Lake Hatchery had a documented coho salmon escapement of 2,790 adults (1,430 males and 1,360 females) and 276 jacks.

xc: Larson

MEMORANDUM State of Alaska

TO: Lou Bandirola
Acting Director
Division of Sport Fish
Juneau

THRU:

FROM: Gary Sanders GHS
Regional Research Supervisor - RI
Division of Sport Fish
Douglas

DATE: May 1, 1987

FILE NO.: 508.01.0

TELEPHONE NO.: 465-4270

SUBJECT: 1986 Coho Salmon Escapements to Northern Southeast Alaska

Attached are three figures illustrating the low coho salmon escapements in the northern half of southeast Alaska in 1986. Two additional figures are attached which show the effect on the Juneau marine recreational fishery for coho salmon resulting from the lack of coho salmon in the Juneau area.

The Yakutat area index streams indicated that the 1986 coho salmon escapement were the lowest in this decade (Figure 1). The 1986 coho salmon escapement (4,637) was 49.9% of the previous 6-year average of 9,287.

The six index streams in the Sitka area also received their lowest coho salmon escapements during the 1980's (Figure 2). The 1986 coho salmon escapement (31) was 28.9% of the previous 6-year average of 107. The data presented in Figure 1 also suggests a 3-year cyclic low in the coho salmon escapements in the Sitka area, i.e., 1980, 1983, and 1986.

The Juneau area index streams also received extremely poor coho salmon escapements in 1986 (Figure 3), i.e., the lowest during this decade. The 1986 coho salmon escapement (934) was 75% of the previous 6-year average of 1,239. Montana Creek, the single largest producer of coho salmon on the Juneau road system received the poorest escapement; 60 coho salmon were observed in 1986 versus the previous 6-year average of 560 coho salmon, i.e., 10.7% of the Montana Creek average coho escapement.

The poor coho salmon catch rate, catch-per-unit-effort (CPUE), in the Juneau marine recreational fishery in July 1986 (Figure 4) was a key factor influencing the 10-day closure of the commercial troll fishery in early August. Subsequently, the 1986 CPUE increased to mirror the previous 3-year mean CPUE. However, it did decline rapidly in late September. The 1986 Juneau marine recreational fishery for coho salmon ended with a below average catch (Figure 5). The 1986 sport harvest of coho salmon in the Juneau marine fishery (9,763) was 72.3% of the previous 6-year average (13,500).

As an after-thought, I have attached a table (Table 1), summarizing the data to produce Figures 1-3.

If I can supply you with additional data or clarify any of this information, just let me know.

Attachment

cc:
Frank Van Hulle

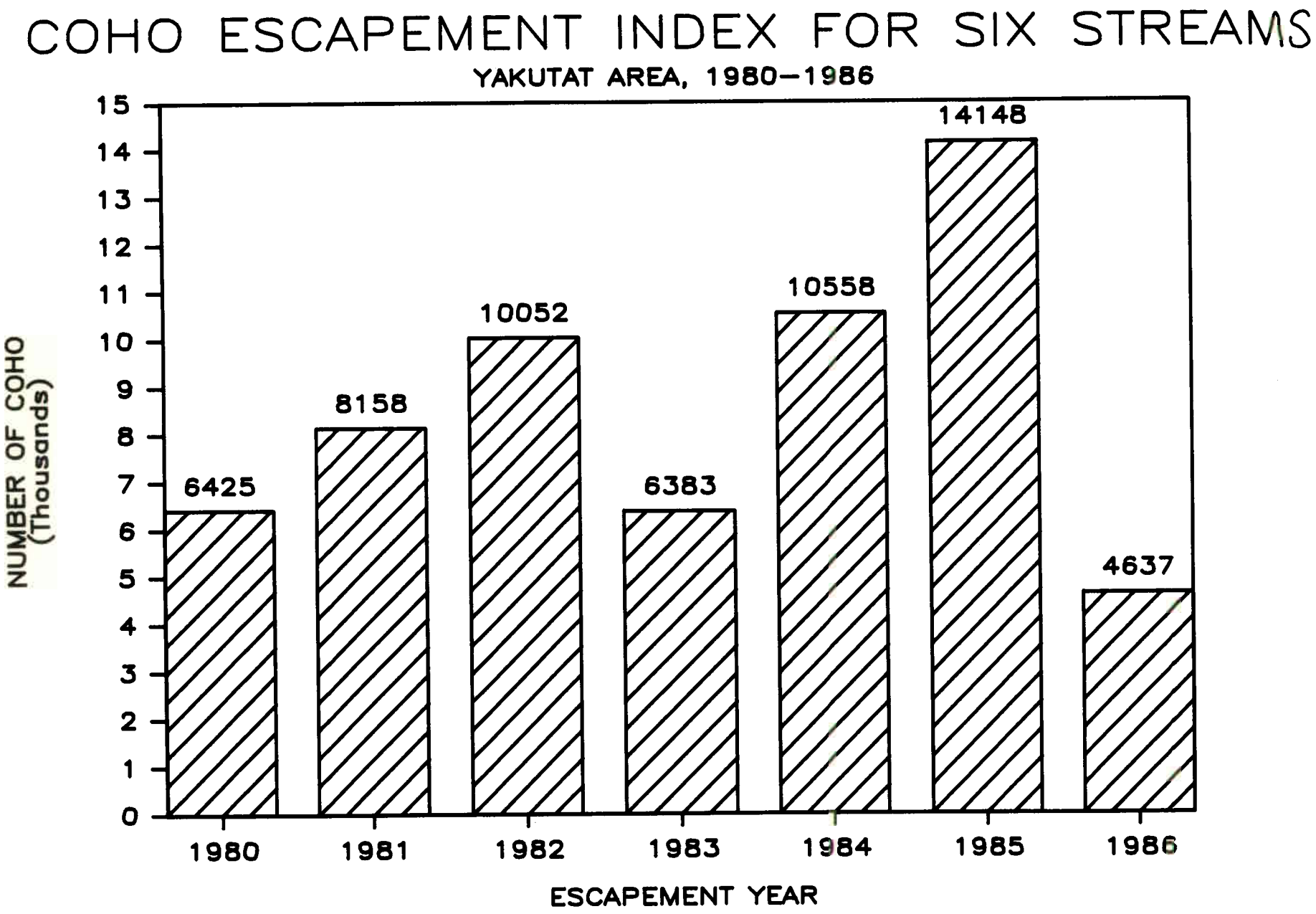


Figure 1. Coho salmon escapement data for the Yakutat area, 1980-1986.

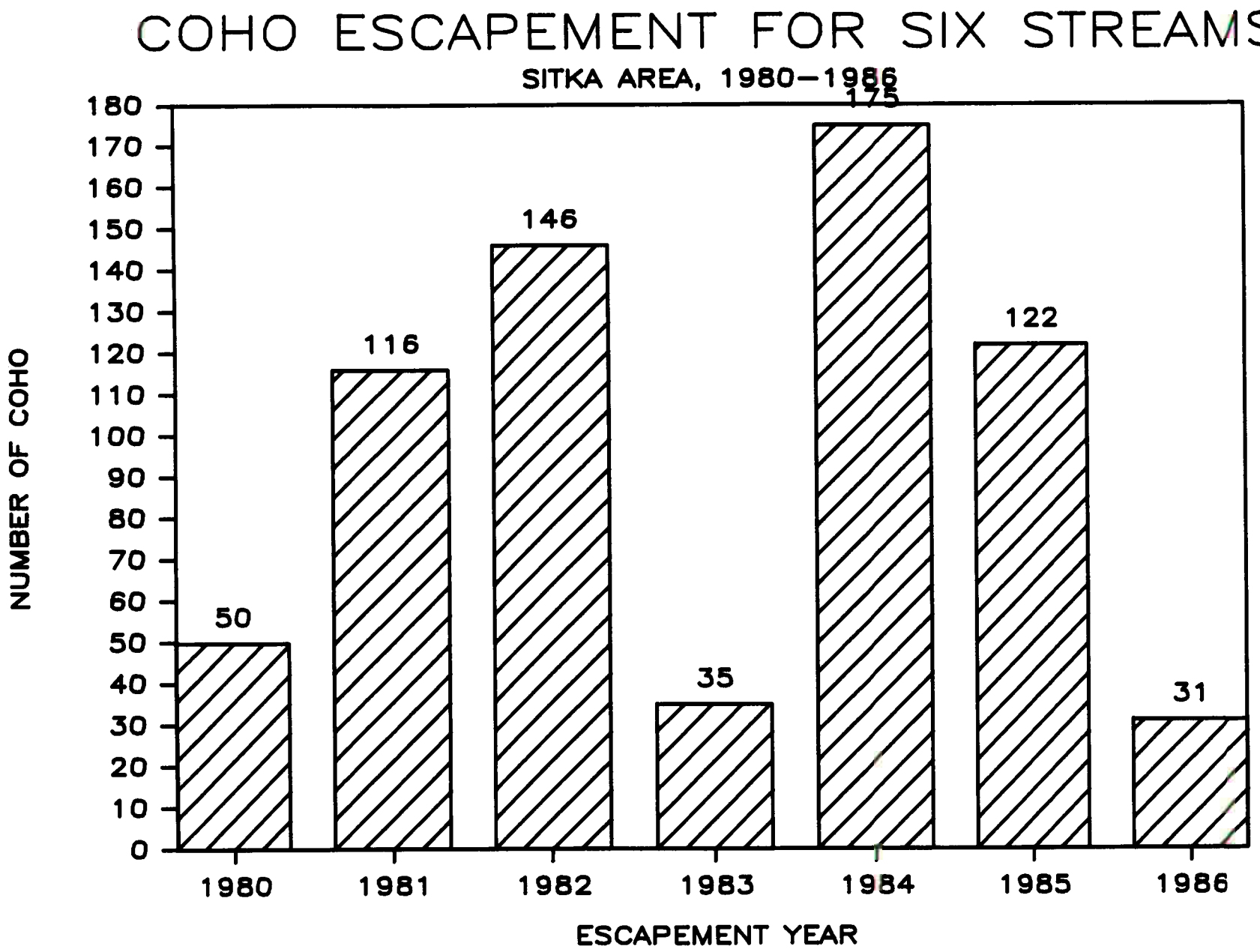


Figure 2. Coho salmon escapement data for the Sitka area, 1980-1986.

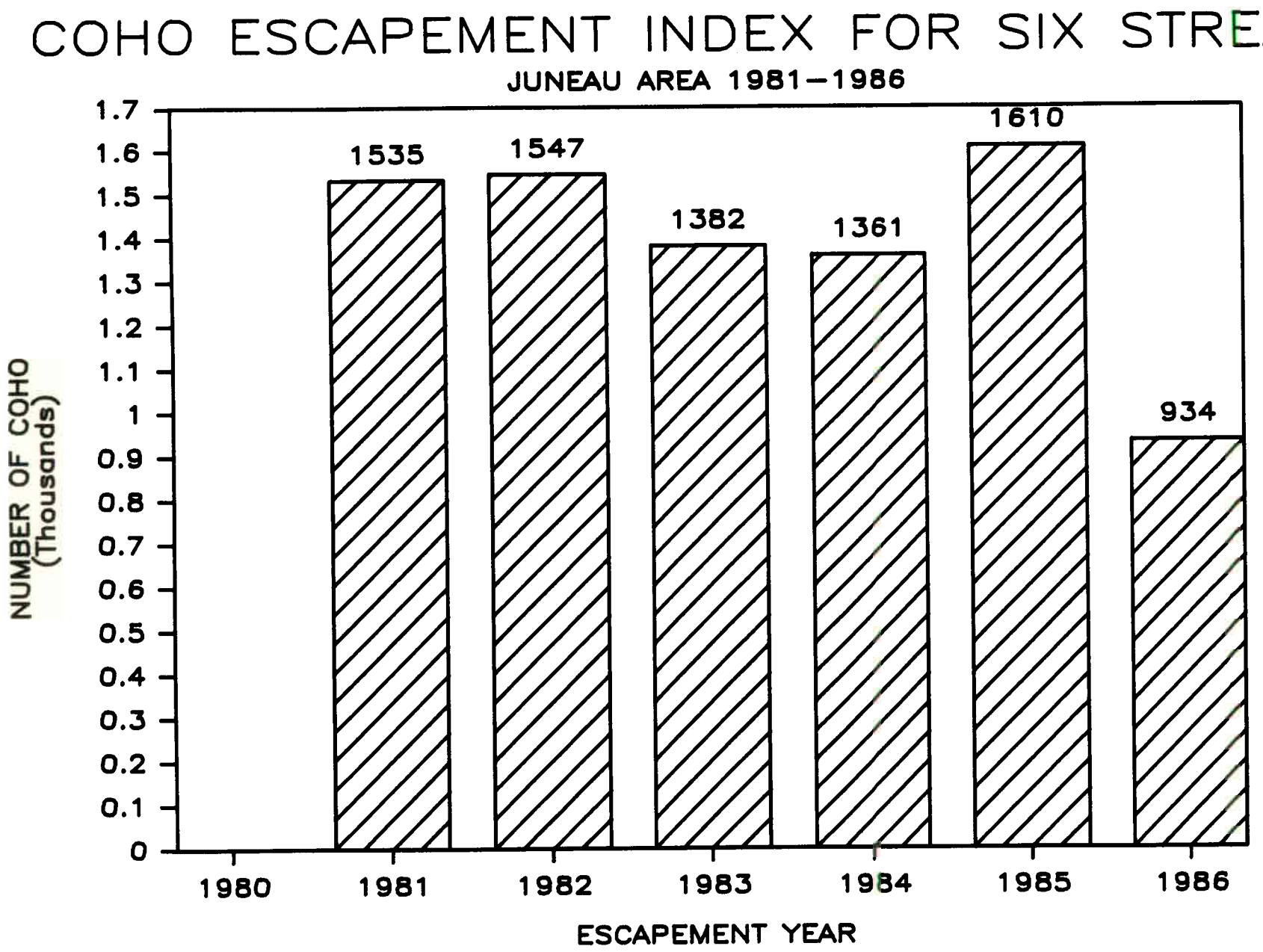


Figure 3. Coho salmon escapement data for the Juneau area, 1980-1986.

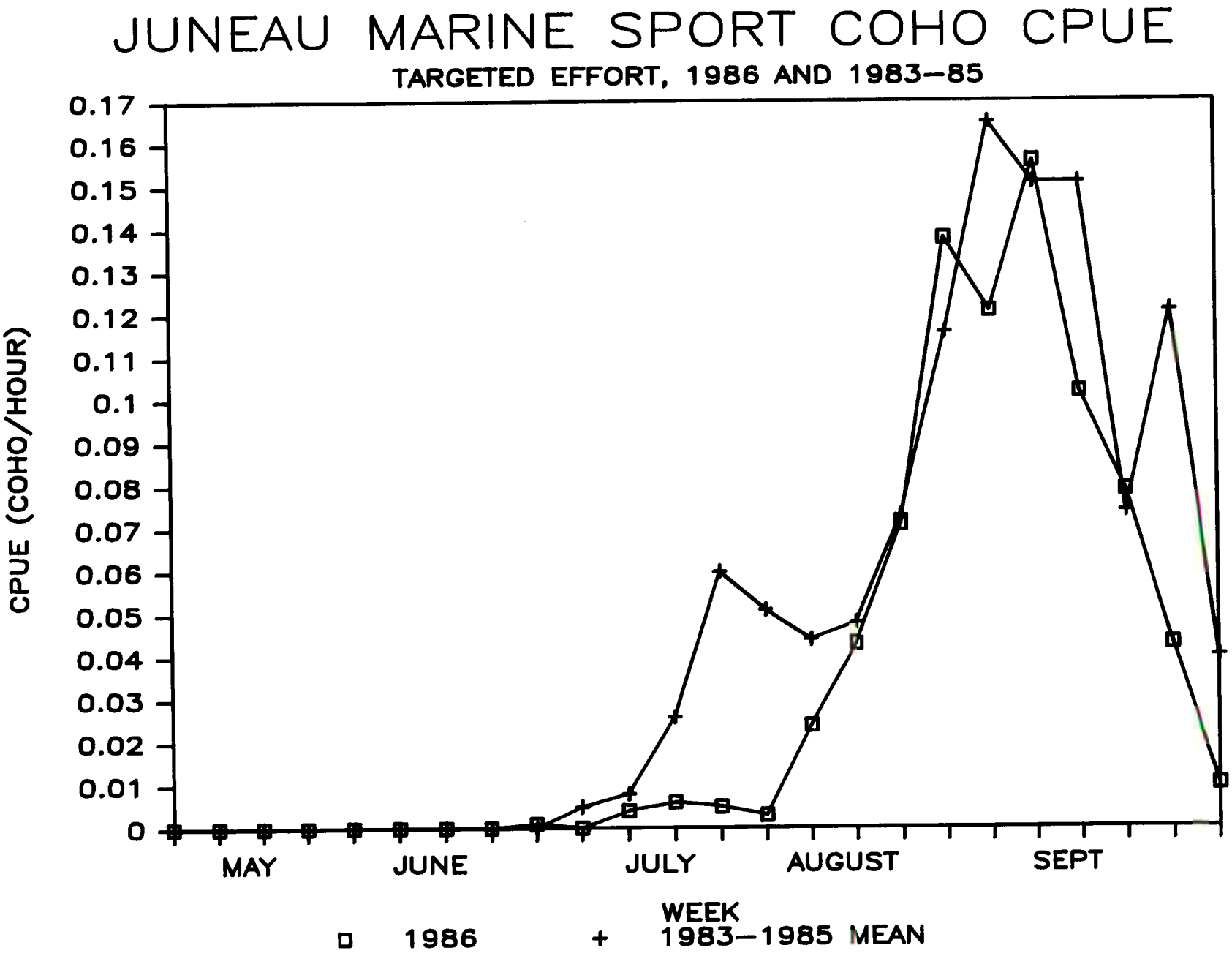


Figure 4. Catch per unit of effort (CPUE) data for the Juneau marine sport fishery for coho salmon.

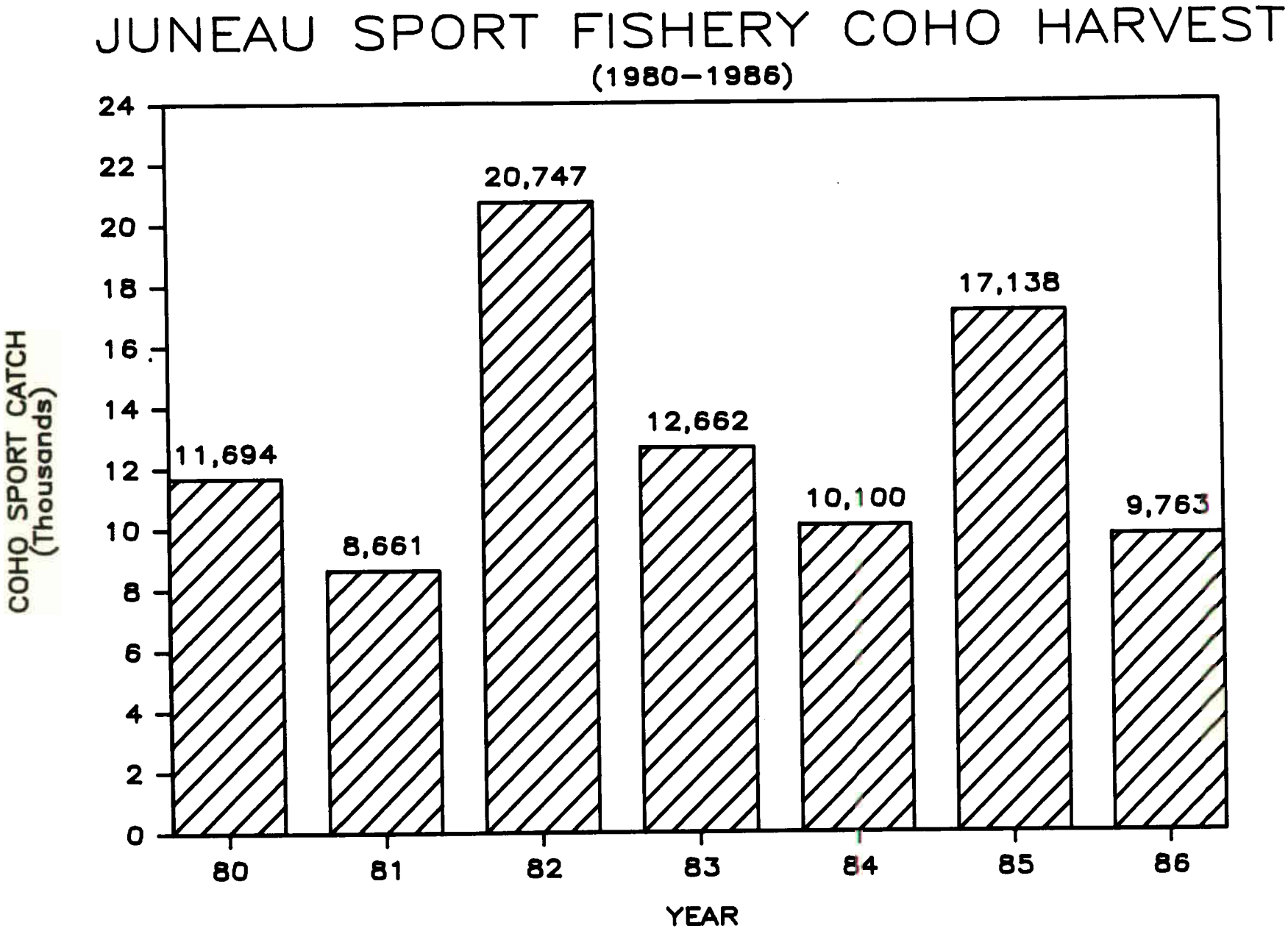


Figure 5. Juneau marine recreational fishery coho salmon harvest data, 1980-1986.

Table 1. Coho salmon escapement indices in the in the Sitka, Juneau, and Yakutat areas, 1980-1986.

YEAR	SITKA	JUNEAU	YAKUTAT
1980	50	ND*	6425
1981	116	1535	8158
1982	146	1547	10052
1983	35	1382	6383
1984	175	1361	10558
1985	122	1610	14148
1980-85 AVE	107	1487	9287
1986	31	934	4637

*ND = No Data

MEMORANDUM

State of Alaska

DEPARTMENT OF FISH AND GAME

TO: Frank Van Hulle
Regional Supervisor
Sport Fish Division
Douglas

THRU:

DATE: January 23, 1986

FILE NO.: 508.00.0

TELEPHONE NO.: 465-4270

SUBJECT: Complete 1985 CF/SF Coho Salmon Escapement Data

FROM: Gary Sanders GHS
Regional Research Supervisor
Sport Fish Division
Douglas

The following table summarizes the 1985 coho salmon escapement data collected by the Divisions of Commercial Fisheries (CF) and Sport Fish (SF):

AREA	ESCAPEMENT COUNT	DIV.	COMMENT
A. Yakutat			
1. Akwe River	2,400	CF/SF	41% of 10-yr avg.
2. Alsek River			
a. Tannis River	400	CF	
b. Cabin Creek	50	CF	
3. Ankau River	5,000	CF/SF	
4. Doame River	5,000	CF	
5. Italio River	3,000	CF/SF	average
6. Old Italio River	2,500	CF	
7. Tawah Creek	15,000	CF/SF	324% of 7-yr avg.
8. Lost River	6,000	CF/SF	194% of 10-yr avg.
9. Situk River	6,490	CF/SF	average
10. Mamby Stream	9,100	CF	
11. Spoon Creek	500	CF	
12. Sudden Stream	1,950	CF	
13. Esker Stream	1,450	CF	
14. Jetty	5,100	CF	
15. Kaliakh River	37,500	CF	
16. Tsiu-Tsivat Rivers	52,350	CF/SF	181% of 10-yr avg.
17. Kiklukh River	14,000	CF	
B. Haines			
1. Chilkoot Lake (weir)	2,188	CF	180% of average
2. Chilkat River			
a. Lower Chilkat River (below Wells Bridge)	1,500	CF	
b. Upper Chilkat River (above Tahini)	41	CF	

AREA	ESCAPEMENT COUNT	DIV.	COMMENT
c. Tahini River	268	CF	past peak
d. Kelsall River	132	CF	
e. Tsirku River	350	CF	
f. Spring Creek	79	CF	
g. 37-Mile Creek	65	CF	
3. Berners River	6,169	CF	113% of 5-yr avg.
C. Juneau			
1. Auke Creek (weir)	942	CF	150% of 5-yr avg.
2. Hasselborg River	550	CF	
3. Jims Creek	156	CF	
4. Chaik Bay Creek	104	CF	
5. Switzer Creek	122	SF	average
6. Salmon Creek	1,300	SF	hatchery return
7. Peterson Creek (25 mi.)	276	SF	above average
8. Steep Creek	186	SF	average
9. Jordan Creek	70	SF	poor
10. Montana/McGinnis Creeks	810	SF	excellent
11. Peterson Creek (Outer Pt.)	144	SF	excellent
12. Fish Creek (Douglas Is.)	31	SF	average
13. Johnson Creek (Douglas Is.)	24	SF	average
14. Taku River			
a. Sockeye Creek	214	SF	poor
b. Johnson Creek	150	SF	average
c. Yehring Creek	560	SF	below average
d. Fish Creek	180	SF	good
e. Flannigan Slough	2,320	SF	excellent
f. Sittakanay Creek	500	SF	?
D. Sitka			
1. Sinitsin Creek	144	CF/SF	good
2. St. John Creek	109	CF/SF	good
3. Nakwasina River	408	CF/SF	poor
4. Salmon Lake (weir)	1,388	SF	good
5. Indian River - wild stock	86	CF/SF	poor
6. Indian River - hatchery stock	450	CF/SF	good
7. Starrigavin Creek	193	CF/SF	average
8. Kizuchia Creek	122	CF/SF	average
9. Sea Lion Cove	188	NSERAA	?
10. Little Port Walter	83	NSERAA	?
11. Black River	1,628	NSERAA	excellent
12. Ford Arm Lake (weir)	2,325	CF	average

AREA	ESCAPEMENT COUNT	DIV.	COMMENT
E. Petersburg			
1. Ohmer Creek	89	SF	poor
2. Bear Creek	65	SF	poor
3. Sumner Creek	46	SF	poor
4. Falls Creek	125	SF	poor
5. Petersburg Creek	275	SF	poor
F. Ketchikan			
1. Ward Creek - wild stock	560	SF	(10/24/85) below average
2. Ward Creek - hatchery stock	1,079	SF	(12/09/85)
3. Indian Creek	812	CF/SF	good
4. Carrol River	1,550	CF/SF	excellent
5. Eulachon River	1,880	CF/SF	excellent
6. Warm Chuck Lake (weir)	956	CF	85% of 1982-83 avg.
7. Hugh Smith Lake (weir)	903	CF	54% of 1982-84 avg.

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